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ABSTRACT

This cultural heritage resource guide has been prepared as a tool for teachers to help promote better understanding of Chinese students in the New York City public schools. China has an ancient history and a rich cultural tradition, and people all over the world have recognized China as one of the world's greatest civilizations. The earliest Chinese immigrants to the United States can be dated in 1784, but substantial immigration began with the 1848 Gold Rush in California and subsequent railroad building. A timeline traces Chinese immigration patterns and sketches their contributions to U.S. society. The guide is divided into three sections. The first, "Celebrating Our Diversity--A Thematic Unit" contains six literature-based whole language, mini-thematic units. It contains a variety of lesson plans and reproducible pages designed for use with primary-grade children but adaptable for others. Six selections from Chinese literature are included. Each unit begins with a discussion of a children's book, background information about the author, cultural facts, and suggested followup activities for learning centers. Section 2, "Customs and Traditions," focuses on major traditional festivities and customs, namely the Chinese New year celebrations, the Moon Festival, and the Chinese Lunar Calendar. Section 3, "Chinese Inventions," gives brief information on some early contributions. Each theme is connected to the curriculum with activities in subject content areas that encourage cooperative learning and higher-order thinking skills. One appendix presents facts about New York City's Chinatown, and the other discusses achievements and contributions of Chinese Americans. A bibliography of 101 books for students and teachers is included. (SLD)

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ED 416 259

FROM AN ANCIENT TRADITION TO THE PRESENT

CHINESE CULTURAL HERITAGE RESOURCE GUIDE

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Preface

The Chinese youngsters who attend New York City's public schools bring with them an ancient and rich cultural heritage. As educators, we have a responsibility to all the students in our schools to build on the knowledge and experience they bring. This can be achieved with better understanding of our students, their families and their communities.

This cultural heritage resource guide has been prepared as a tool for teachers, which we hope will promote better understanding of our Chinese students and their communities in order to serve them better. It is part of our effort to offer all youngsters an education of high quality and equity that builds on what they bring to school.

Lillian Hernandez

Lillian Hernandez, Ed. D.
Executive Director

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The overall preparation of the guide was under the supervision of Noemí Carrera Herendeen, Director, Office of Bilingual Curriculum and Instructional Services.

A group of educators worked arduously in order for this teacher's resource guide to become a reality. Ching Fang Chen and Amy Lee did the preliminary research and the writing of most of the information contained herein. Richiang Amy Chang and Wen Min Yu were also contributors. We thank them all for their work.

Ching Fang Chen and Wen Min Yu should also receive our appreciation for translating portions of the guide either into Chinese or into English, depending on the manuscript, in order to have the guide available in both languages. Wen Min Yu also edited the Chinese version and collaborated with the final corrections of the English version of the guide.

Anthony J. Armada and Enrique Santiago edited the guide in English. Jennifer Fung collaborated with the proofreading, correction and layout of the two guides. Their expertise and commitment to the publication of the guides are appreciated.

We also wish to give recognition to Peter Wadsworth, formerly from the Office of Instructional Publications, for the artwork contained in the guide, as well as to Ana Soto for preparing the artwork on the covers.

The wordprocessing of the guide in English was done by Josephine Rodríguez and Migdalia Gloria. Pornpiwan Pengsangthong did the wordprocessing in Chinese. We are grateful for their tireless work and support.

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Introduction

From an Ancient Tradition to the Present, Chinese Cultural Heritage Resource Guide is an introductory study of the nation with the longest history in the world, which also embodies a rich cultural tradition. From this land originated an agricultural society whose political and economic systems, philosophy, literature, arts, technology, science, language, morals and religion, reflect an intimate and harmonious relationship between human beings and nature. Derived from this relation, the Chinese ancient culture made early contributions to the development of world civilizations. A great deal of our world's contemporary achievements and developments can be traced back to ancient Chinese culture.

Ancient China enjoyed its well developed economy and culture, especially during the Han and Tang dynasties, the apex of its ancient history. Agriculture, handicrafts, weaving and shipbuilding were advanced. They used ships and carts as means of transportation. This enabled China to establish extensive economic and cultural relations with Japan, Korea, India, Persia and Arabia. Paper-making, printing, gunpowder and the compass were four major inventions of ancient Chinese science and technology. These inventions have exerted a profound influence on the history of mankind.

Great achievements were also made in the fields of astronomy, mathematics, geography, architecture and medicine. Sun Zi's Art of War remains an invaluable reference for people of the military and economic circles. The *Gan Shi Xing Jing* (Gan Shi Catalogue of Stars) of the Warring States Period is the earliest catalogue of fixed stars in the world. Zhang Heng of the Han Dynasty invented the armillary sphere and seismograph. During the Southern and Northern Dynasties Zu Chongzhi calculated the value of Π to be between 3.1415926 and 3.1415927. He was the first person in the world to have accurately calculated the value of Π to seven decimal places. The *Ben Cao Gang Mu* (Compendium of Materia Medica) by Li Shizhen of the sixteenth century recorded more than 1,800 kinds of herbal medicines and over 10,000 prescriptions. The building of the Great Wall has been one of the world's wonders.

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Meanwhile, famous thinkers such as Lao Zi and Confucius were influencing the traditional Chinese culture and even world civilizations. Chinese classical literature and art were the most valuable treasures which crystallized the wisdom and power of the Chinese people. Han yuefu (ballads of the Han Dynasty), Tang poetry, Song ci (lyrics of the Song Dynasty), Yuan drama, and Ming and Qing fiction were the distinguished literary styles developed in the particular dynasties. The Qing's *A Dream of Red Mansions* by Cao Xueqin has been considered one of the masterpieces of the Chinese classical literature and continues to inspire research and study both at home and abroad.

In traditional Chinese painting the painter uses paper or silk with brush, ink and pigment. Some paintings produce good contrast between shades of color, vivid expressions and bold outlines of mountains and rivers, landscapes or figures by simple strokes called *freehand brushworks*. Other painters produce fine, delicate *brushwork* paying close attention to the details of human hair or bird feathers making them appear like in real life. This style is called *fine brushworks*. Qi Baishi is one of the best known painters who breaks new ground for traditional Chinese painting by combining the techniques of freehand work with those of fine brushwork in some paintings. Chinese calligraphy is also considered an art that require great skill.

People all over the world recognize China as one of the world's oldest and greatest civilizations. Chinese people have been regarded as hardworking, brave and intelligent people. They have made great contributions to the development of the world. They have also been recorded in the history of the development of the United States.

The following is a historical sketch of Chinese immigration to the United States and their contributions to the building of a great land:

History of Chinese-American Immigration From 1784 to 1990

1784: The first ship from the United States arrives in China to open trade. The shop returns with three Chinese sailors. When the ship returns to China, the three men are left in the United States. There is no further record of what happened to these earliest immigrants.

1847: Three Chinese students arrive in New York City for schooling. One of them, Yung Wing, graduates from Yale in 1854, becoming the first Chinese to graduate in the United States.

1848: The Gold Rush draws Chinese to California to mine gold. Many immigrate as indentured servants. However, the bulk of Chinese immigrants come later for the job in building railroads and in other industries, most of which pay poorly.

1852: California imposes a Foreign Miner's License Tax. Three dollars are collected each month from every foreign miner whc is not being naturalized (granted citizenship) or is prohibited by law from becoming a citizen. (The purpose of this tax was to reduce the number of Chinese immigrating to California as well as to discourage Chinese from mining for gold.)

1854: A law forbids Chinese to testify in court against whites, depriving Chinese of legal protection. Chinese endure repeated acts of violence.

1859: Chinese are excluded from public schools in San Francisco.

1860: The Burlingame Treaty recognizes the right of free migration and immigration on the part of citizens of the United States and China.

1869: The transcontinental railroad is completed. Chinese laborers built most of the western section.

1870: The Naturalization Act makes all immigrants except Chinese eligible for citizenship. Further, it forbids the entry of wives of Chinese laborers.

The Cubic Air Ordinance in San Francisco requires 500 cubic feet of air per person in all dwellings. If too many people are living in an apartment, they can be arrested. This law is enforced only in overcrowded Chinatown.

San Francisco passes an ordinance requiring any Chinese arrested to submit to having his queue ("pigtail") cut off. (This punishment was severe since the Chinese could not return to China without their queue. At that time, China was ruled by a people called the Manchu. The Manchu required all Chinese to wear queues to distinguish them from people of Manchu origin. The queue soon became an identity for Chinese and anyone without one was beheaded).

1871: Anti-Chinese riots break out in Los Angeles and other cities. Law enforcement agencies do little to stop the violence or protect Chinese. A mob of whites shoot and hang 20 Chinese in one night in Los Angeles.

1880: California sets fines for employers hiring Chinese workers.

1882: The Chinese Exclusion Act prevents for 10 years the immigration of Chinese laborers, but lets other Chinese, such as students and travelers, into the United States for short stays. Also, the act excludes from naturalization Chinese who had previously immigrated. (This law makes it easy for Japanese immigrants to replace the Chinese as a source of cheap labor.)

1885: A mob made up of mostly out-of-work whites hit hard by the recession riot against Chinese in Rock Springs, Wyoming. White miners kill 28 Chinese during the rioting. They are never tried for their crimes.

1892: The Geary Act prohibits Chinese immigration for another 10 years.

1902: Congress continues the law against Chinese immigration.

1906: The San Francisco school board rules that all persons of Asian ancestry must attend segregated schools in Chinatown. Japan, by now a world power, intercedes on behalf of its citizens, who are exempted.

A major earthquake in San Francisco destroys all municipal records, opening the way for a new wave of Chinese immigrants. Male immigrants claim they are United States citizens and exercise the right to bring their wives and children to America.

1910: Angel Island is established as a detention center for those Asian, non-laboring classes desiring entry into the United States. There are long delays, sometimes a full year, while people live in difficult conditions.

1913: The Alien Land Law in California prohibits Asian immigrants who are not citizens from owning agricultural land or leasing it for more than three years. Japanese-Americans circumvent this law by purchasing land under their American-born children's names.

1920: Asian immigrants can no longer lease land or purchase land in the names of their children.

1924: The Immigration Act of 1924 declares that no one ineligible for citizenship may immigrate to the United States. (This act is aimed specifically at the Japanese, since earlier laws had restricted Chinese and Asian-Indian immigration.)

1943: In light of China and the United States being allies in World War II, the Magnuson Act repeals the Chinese Exclusion Act of 1882. A quota of 105 people per year set for Chinese immigration.

1945: Congress passes the War Brides Act, allowing 6,000 Chinese women to enter the United States as brides of Chinese-American soldiers.

1947: Congress passes the Displaced Persons Act, giving permanent resident status to 3,500 Chinese visitors, seamen, and students caught in the United States because of Chinese civil war.

California repeals the law banning interracial marriages.

1949: The United States breaks off diplomatic ties with newly formed People's Republic of China.

1952: The McCarran-Walter Act makes Chinese and other Asian immigrants, many of whom have lived in the United States for decades, eligible for citizenship. It also sets up a quota system that favors European immigrants over Asian immigrants. For example, only 100 immigrants per year are allowed entry from each Asian country, compared to 2,500 per year from Germany and 6,000 per year from Italy.

1953: The Refugee Relief Act allows 3,000 Chinese into the United States as refugees of the Chinese civil war.

1962: The National Origins Act raises Asian immigration to 20,000 per year for each independent country outside the Western Hemisphere, reversing decades of discrimination against Asian immigrants. It also establishes a new system of preferences for selecting who from each country can come to the United States. For example, first preference is given to family members of an American citizen.

1967: The United States Supreme Court rules that laws against intermarriage between Caucasian and Asian persons are unconstitutional.

1973: Based on a case involving students in San Francisco's Chinatown, the United States Supreme Court decides that bilingual education is required for non-English speaking students.

1978: Chinese flee from their homes in Vietnam and other parts of Southeast Asia because of persecution.

1982: Vincent Chin, a Chinese-American, is murdered in Detroit by two unemployed autoworkers who reportedly mistake him for a Japanese, who they blame for their plight. They were acquitted, never serving a day in prison for their crime.

1987: The Immigration Reform Act and Control Act of 1985 is passed, raising the quota for immigrants from Hong Kong from 600 to 5,000 a year. It also allows aliens who were in the United States prior to January 1, 1982, to apply for temporary status and to become United States citizens. There are no changes in the preference system which allows for family reunification.

This resource guide is divided into three sections, providing our teachers and students a glimpse of Chinese culture.

Section One, "Celebrating Our Diversity - A Thematic Unit" contains six literature-based whole language, mini-thematic units. It provides a variety of lesson ideas and reproducible pages designed for use with primary grade children but adaptable for others. Six children's literature selections: **"How The Ox Star Fell From Heaven," "The River Dragon," "Count Your Way Through China," "Grandfather Tang's Story," "Our Home Is The Sea," "Lion Dancer: Ernie Wan's Chinese New Year"** are included. The books chosen are intended to illustrate a plan for teaching with an interdisciplinary approach. Each mini-unit begins with a children's book, background information about the author, cultural facts that relate to the story, and suggested follow-up activities for learning centers.

Section Two, "Customs and Traditions," focuses on major traditional festivities and customs, namely, the Chinese New Year Celebrations, the Moon Festival and the Chinese Lunar Calendar.

Section Three, "Chinese Inventions," gives brief information on some early contributions.

Each theme is connected to the curriculum with activities in language arts, mathematics, science, social studies, art, music, games and cooking. Many of these activities encourage cooperative learning and higher-order thinking skills. We hope teachers will use this guide as a tool to do further study and to adapt ideas and activities to meet the needs of their students.

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SECTION I

CELEBRATING OUR DIVERSITY - A THEMATIC UNIT

INTRODUCTION

"Celebrating Our Diversity - A Thematic Unit" contains six literature-based whole language, mini-thematic units. It provides a variety of lesson ideas and reproducible pages designed for use with primary children. At its core are six high-quality children's literature selections: **"How The Ox Star Fell From Heaven," "The River Dragon," "Count Your Way Through China," "Grandfather Tang's Story," "Our Home Is The Sea," and "Lion Dancer: Ernie Wan's Chinese New Year."** The books chosen are intended to illustrate a plan for teaching with an interdisciplinary approach. Each mini-unit begins with a children's book, background information about the author, interesting cultural facts that relate to the story, and suggested follow-up activities for learning centers.

In addition, the theme is connected to the curriculum with activities in language arts, mathematics, science, social studies, art, music, games and cooking. Many of these activities encourage cooperative learning and higher-order thinking skills.

This thematic unit includes:

SYNOPSIS

This section gives you a quick look at what each story is all about.

BACKGROUND

Before reading each story, point out where the story takes place. A small map identifying the location of the story is provided on the first page of each lesson. If possible, have a large world map available in your classroom for children to use as a reference. This section also provides information about the author and interesting cultural facts that relate to the story.

CURRICULUM CONNECTIONS

Follow-up activities in language arts, mathematics, science, social studies, art, music, games and cooking are provided for each story. Take advantage of community resources whenever possible. For example, when children are making a replica of a piece of folk art, try to locate the authentic item for display. Often, authentic items can be purchased at import stores in Chinatown.

A BIBLIOGRAPHY

A list of suggested children's literature on the theme can be found on page 213.

MATHEMATICS

- Count from 1 to 10 in Chinese
- Make a count-your-way book for the USA
- Make a Chinese counting mini-book
- Capacity
- Classification
- Comparison
- Geometry
- Play with tangrams
- Graph favorite Chinese tea/rice dishes
- Rice measuring station

MUSIC/MOVEMENT

- Make a gong
- Play Chinese string instruments
- Practice Tai Chi
- Display musical talents at a school-wide Multicultural Music Festival

SOCIAL STUDIES

- Make a timeline
- The Chinese art of tea drinking
- Draw a map of Chinatown
- Plan a Chinese table
- Compare/contrast Chinese/Western clothing
- Study history of "The Great Wall"
- Map skills
- Organize "Grandparents Field Day"
- Compare Chinese/Japanese/Korean chopsticks

SCIENCE

- Observe and record the growing process of a rice plant
- Study parts of a rice plant
- Identify the silk
- Life cycle of the silkworm
- Compare the different kinds of rice
- K-W-L Charts
- Compare pandas/bears
- Compare monkeys/human beings
- Compare and contrast Oriental/Western dragons
- Make 2/3 way venn diagrams
- Grow sprouts
- Compare silkworm/butterflies

LANGUAGE ARTS

- Webbing
- Tell tangram stories
- Study "patience" proverbs
- Write a Chinese Hello Book
- Prepare a Chinatown scrapbook
- Make wanted posters
- Discuss animal tricksters
- Write acrostic poems
- Write animal tricksters
- Write pop-up books
- Create invitations
- Create Flip booklets
- Create Panel Big Books
- Create accordion books

GAMES

- Play "catch the dragon's tail" games
- Play Chinese puzzle games
- Play "fish catch" games
- Play "dragon hunt" games
- Eat with chopsticks

COOKING

- Make Zong Zi
- Make candy figures
- Make congee soup
- Plan a Chinese meal
- Print Chinese characters with a brush and ink
- Make fried rice
- Make sweet cakes
- Make Bao Zi
- Make fortune cookies

ART

- Make a cardboard Great Wall
- Make a panda stick puppet
- Practice Chinese writing
- Practice calligraphy
- Make a dragon mural
- Design a lion costume
- Make Lai See, red envelopes
- Create lucky collages

- Create lucky symbols
- Make a "chop"

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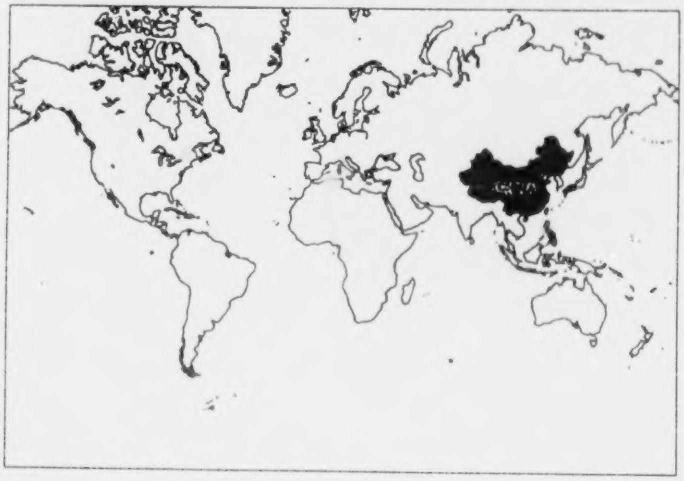
HOW THE OX STAR FELL FROM HEAVEN

Retold and illustrated by Lily Toy Hong
Morton Grove, Illinois: Albert Whitman & Company, 1991



Synopsis

How did oxen come to be on earth? According to this Chinese tale, oxen once lived lives of luxury in the heavens. But after the Ox Star incorrectly delivered an important message, he was banished from the heavens. The ox's blunder became the farmer's blessing. That is why, today, oxen are beasts of burden.

Background

China is an agricultural country. Eighty percent of the people are engaged in agricultural work. Naturally, there are many tales about farming and farm animals. For many years, the ox has been the main beast of burden on farmlands in China. The author, Lily Toy Hong, grew up in a large Chinese-American family. She says she always wanted to write and illustrate children's books when she grew up. She got the idea for this book after she did an illustration of oxen for a college art assignment. Later, she expanded the folktale on which this story is based.

Curriculum Connections

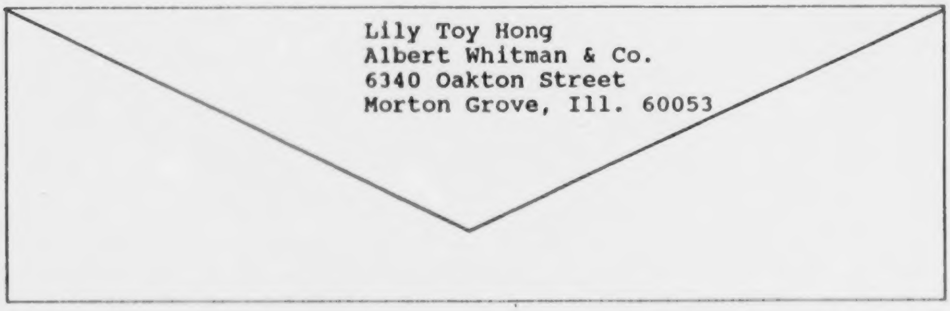
About the author

Help children scan the story to find the part that describes what the characters in the book like to eat (rice, vegetables, and Chinese sweet cakes). Then, read to the class the notes on Lily Toy Hong, author of *How the Ox Star Fell from Heaven*, that appear on the book's end papers. (Here it should be noted that the author "enjoys learning more about Chinese culture and eating rice every day.") Tel the children that writers often include experiences from their own lives in their books, which is why the author may have chosen to show people enjoying a rice meal. Encourage your children to send Lily Toy Hong pictures or letters. This will provide experience in letter writing and addressing envelopes. Send letters to:

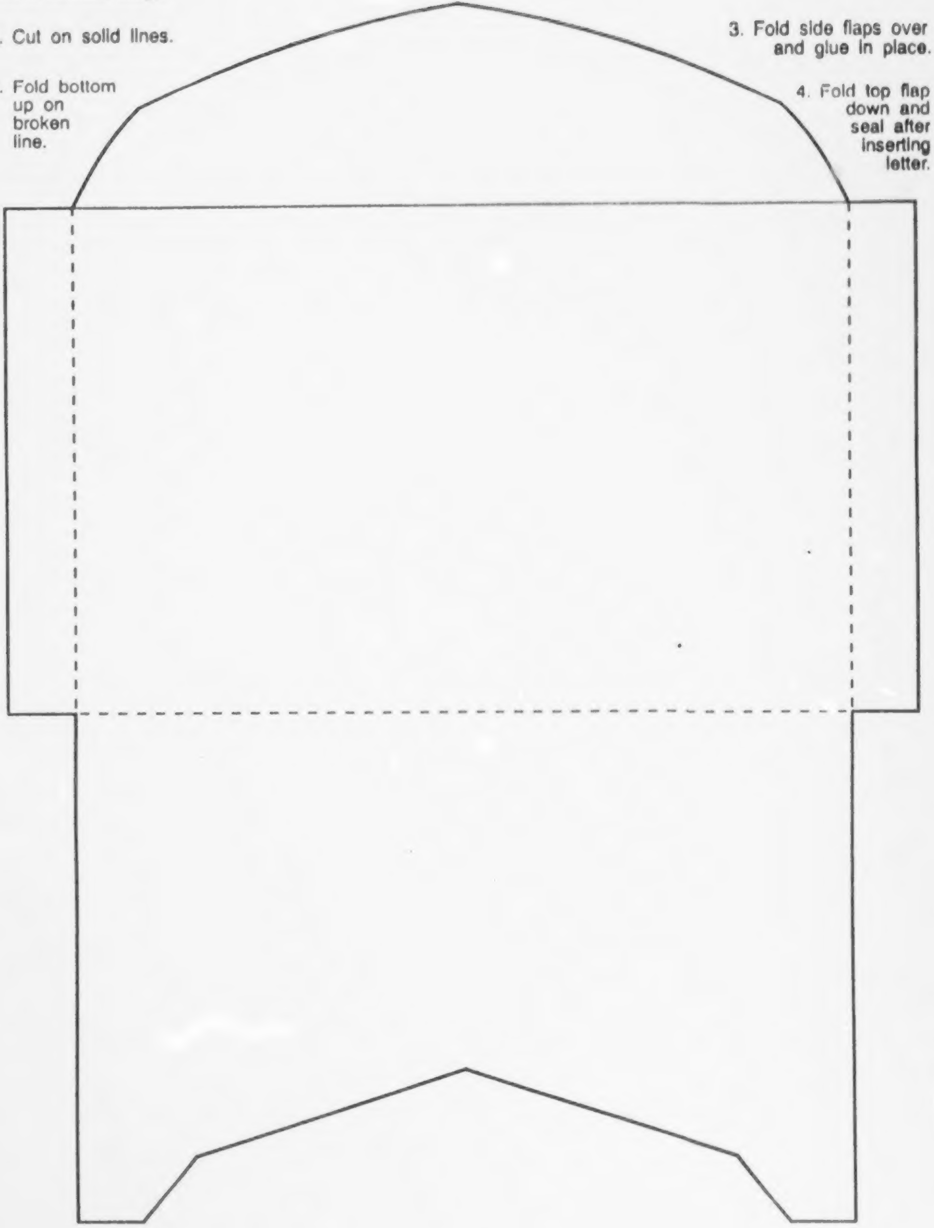
Lily Toy Hong
Albert Whitman & Co.
6340 Oakton Street
Morton Grove, Ill. 60053

Make an envelope

Cut on the solid lines, fold on the dotted lines, and glue the sides. Allow the students to exchange addresses and teach them to correctly address the front of an envelope.



MAKE AN ENVELOPE



Make an Envelope

1. Cut on solid lines.

2. Fold bottom up on broken line.

3. Fold side flaps over and glue in place.

4. Fold top flap down and seal after inserting letter.

RICE

"With coarse rice to eat,
with water to drink,
and my bended arm for a pillow -
I still have joy in the
midst of these things."

Confucius

There are many grain crops grown in China. The main crop in the North is wheat. In the South, the main crop is rice. The people who live in southern China are the "rice-eating" people. They eat steamed rice, rice-flour noodles, and rice gruel.

- Have you ever been to a Chinese restaurant? Were you served rice?
- How many different types of rice dishes have you eaten? (steamed rice, rice cakes, fried rice, and so on.) Graph your favorite ways to eat rice.

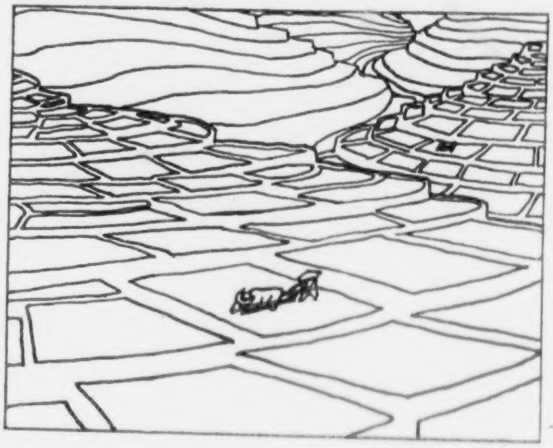
Over a six-day period, graph the number of times you ate the different types of rice dishes. You may be surprised at the results.

SUSHI	SPANISH RICE	STEAMED RICE	FRIED RICE	RICE CAKES	RICE PUDDING

ALL ABOUT RICE

China has more people to feed than any other country in the world. Many of the people in China earn their living by farming. Chinese farmers plant rice seeds in small plots of ground called "seedbeds." These seedbeds are flooded with water and the plants are allowed to grow for about one month. Then the baby plants are moved to a larger field which is also then flooded. When the plants are fully grown, the water is drained off and the crop is harvested. Use Flip Booklets and Panel Big Books to describe the life cycle of a rice plant.

Right:
Chinese rice fields,
or ***paddies***,
that are laid
out in terraces.



In China, rice is even grown in the mountains. Terraces in the form of steps are dug on the slopes. Stone walls around the terraces hold the water in the paddies. Water for the rice comes from rainfall and from mountain streams. The water flows down from terrace to terrace through little canals.

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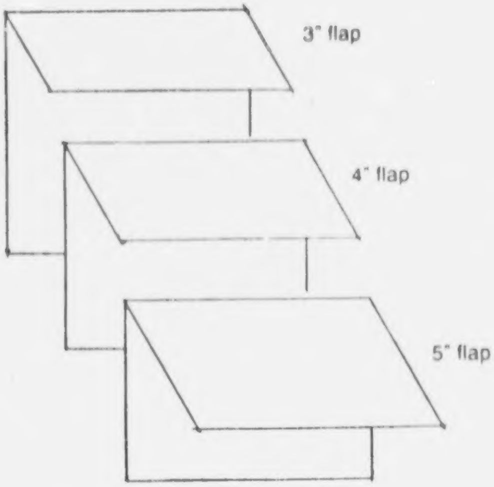
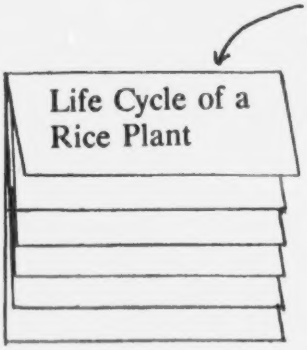
FLIP BOOKS

Flip Books are easy to put together, and young children enjoy them.

1. Fold 8 sheets of 8½" x 11" paper this way.


3" flap
4" flap
5" flap

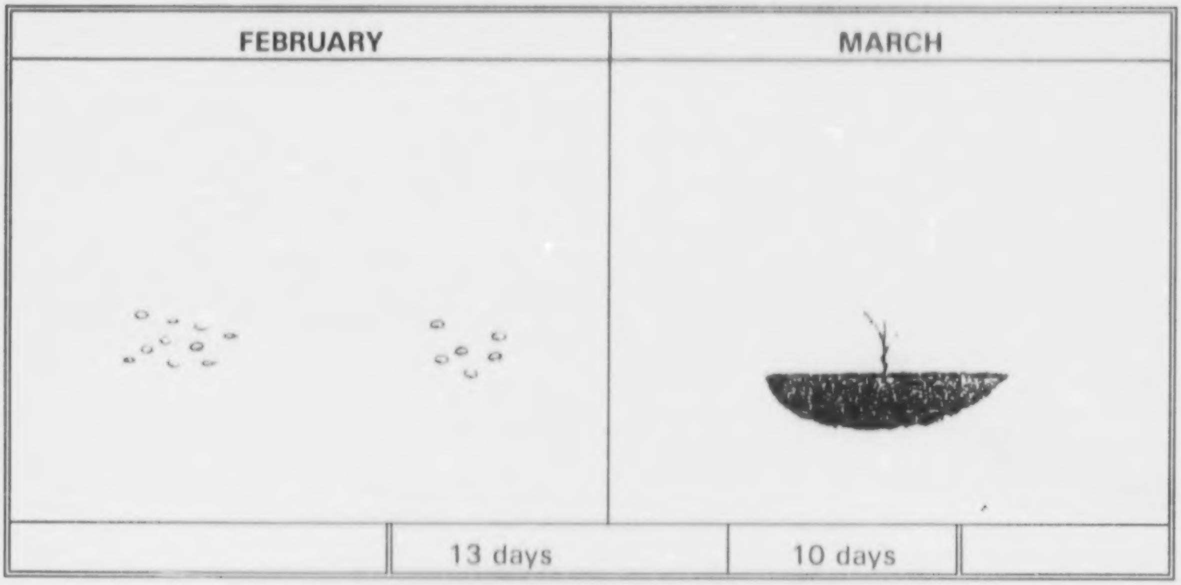
2. Then staple them together on the common fold.


Life Cycle of a Rice Plant

Assemble pages and staple here.
(Staple from inside with long-arm stapler.)

3. Print "Life Cycle of a Rice Plant" on the cover.
4. Put illustrations on separate paper.
5. Put text at the bottom of each page.

THE LIFE CYCLE OF A RICE PLANT


FEBRUARY
MARCH
13 days
10 days

February 27th

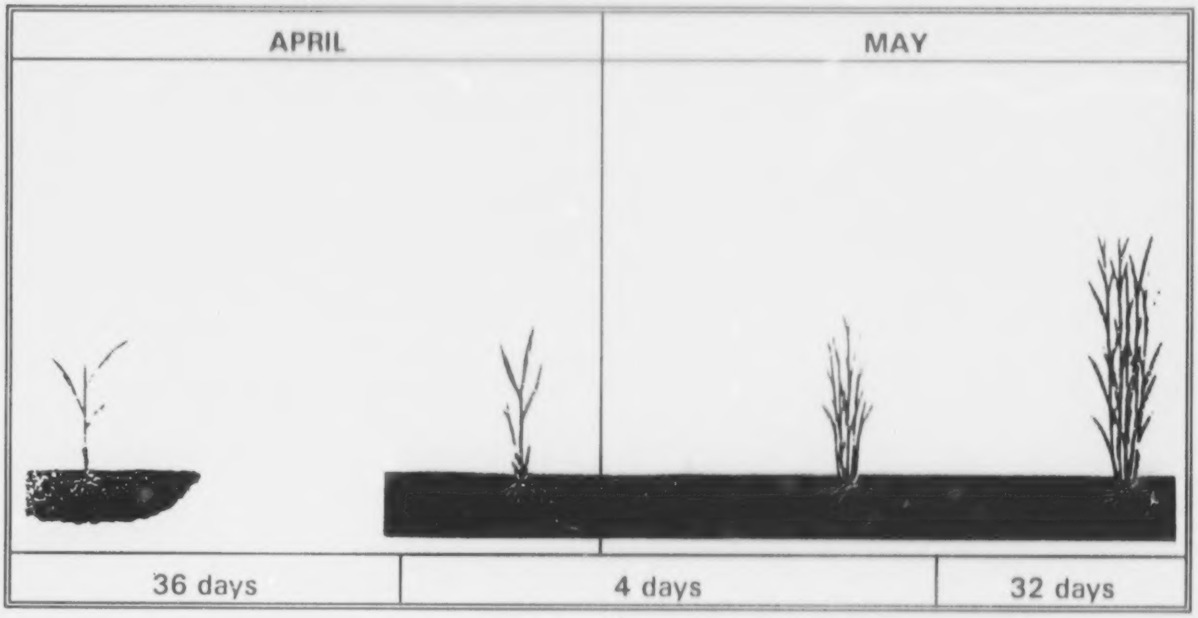
The rice seeds are soaked in water to soften them.

March 10th

They are ready for planting.

March 20th

The first shoots appear.


APRIL
MAY
36 days
4 days
32 days

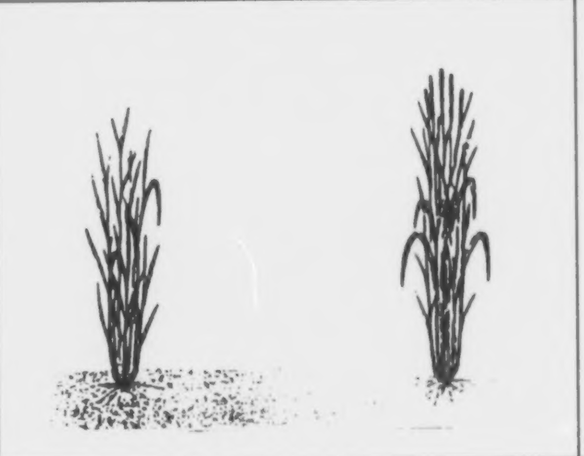
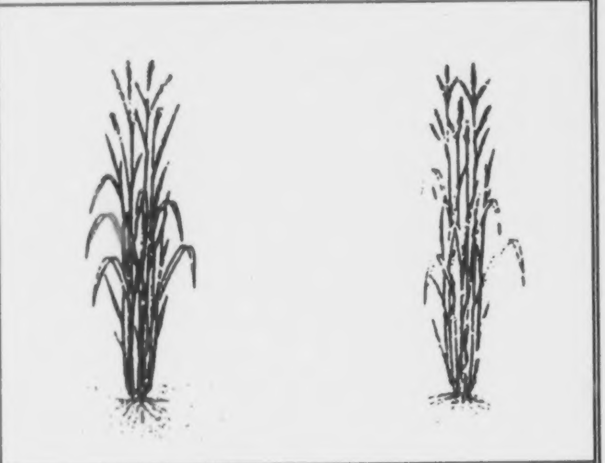
April 25th

The young shoots are planted in paddies.

April 29th

The roots expand and dig into the earth.

THE LIFE CYCLE OF A RICE PLANT (continued)

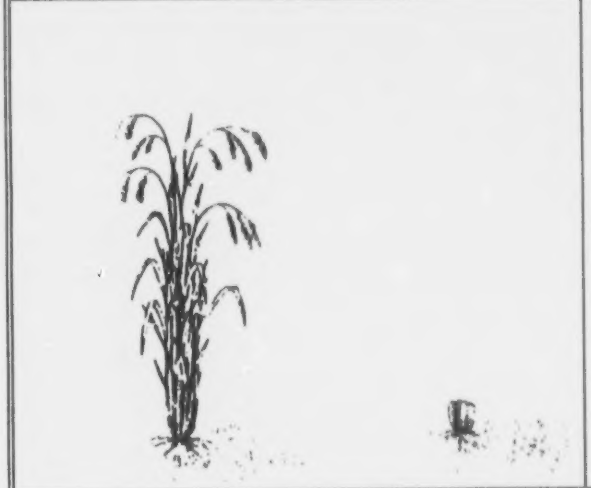
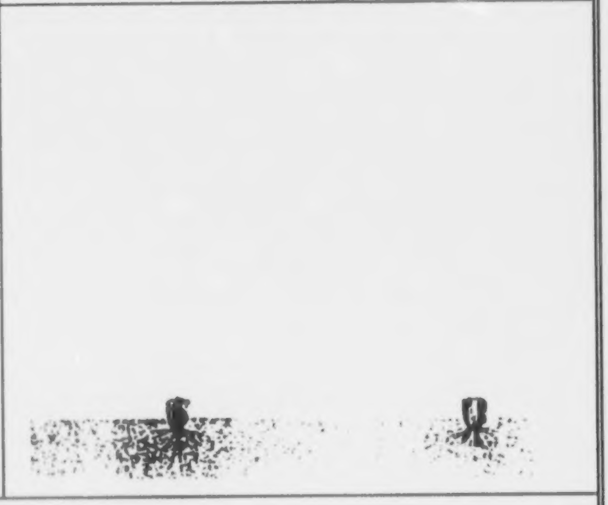
JUNE	JULY
	
27 days	53 days

June 15th

Mature rice plants

June 28th

The heads emerge at the top of the plant stems.

AUGUST	SEPTEMBER
	

August 20th

The rice plants turn golden and are full of grains.

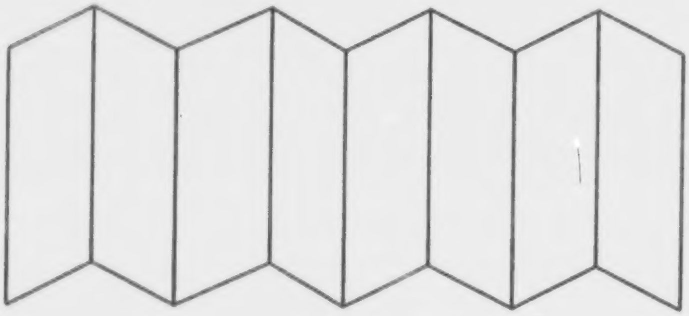
September - January

The farmers let the water flow back to the river. The rice paddies dry out, turning to hard mud.

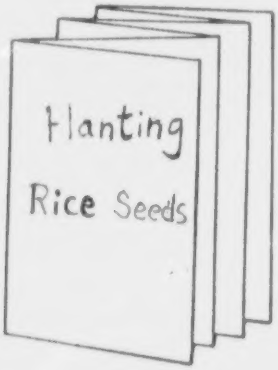
MAKING A PANEL BIG BOOK

Painting sets of pictures for albums was widely practiced by 17th century Chinese painters. Follow the directions to make a panel big book.

1. Cut a 12-foot length of white butcher paper.
2. Accordion fold the paper into eight 18-inch sections.



3. Spread the paper on the floor so that the children can have access to it for coloring.
4. Print "Planting Rice Seeds" on the cover.
5. Put illustrations on separate paper. This is an excellent sequencing activity.
6. Display the finished product as a mural.
7. Fold the mural on the original accordion folds. Staple it close to the left edge. Tape over the staples, if desired.



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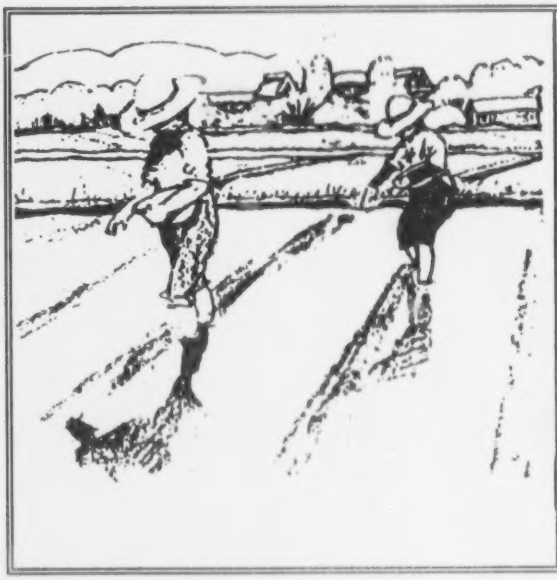
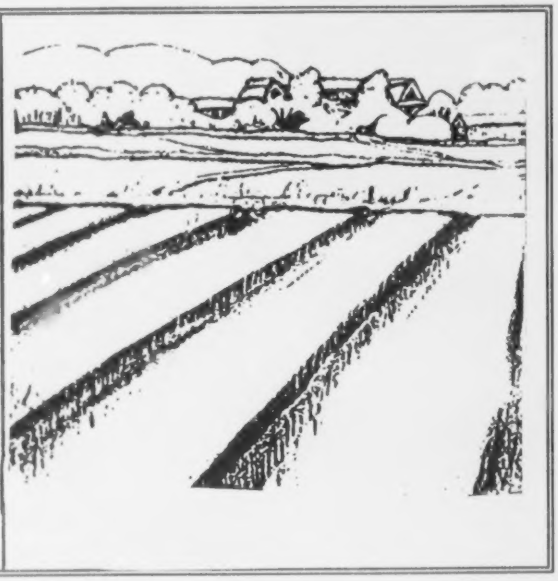
PLANTING RICE SEEDS



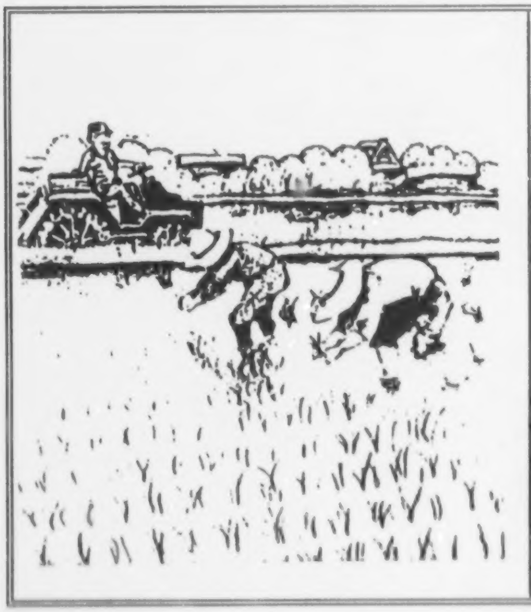
1. February - March

The seeds are sprouted
in wet sacks.



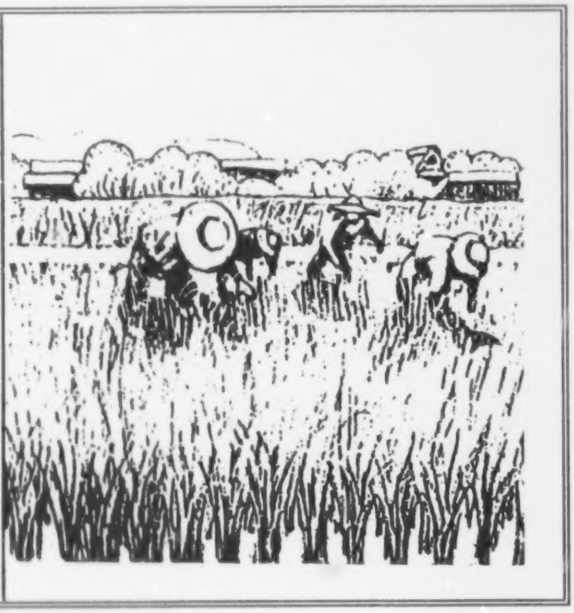
2. March - April

The shoots are then planted
in the nursery beds.



3. April

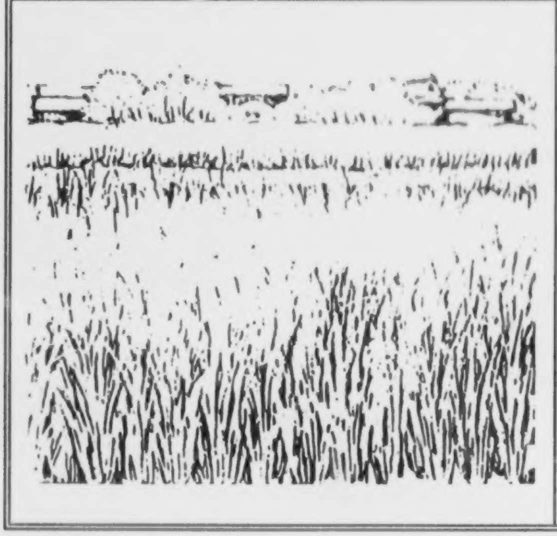
The rice shoots are planted
in rows with plenty of room to grow.



4. April - June

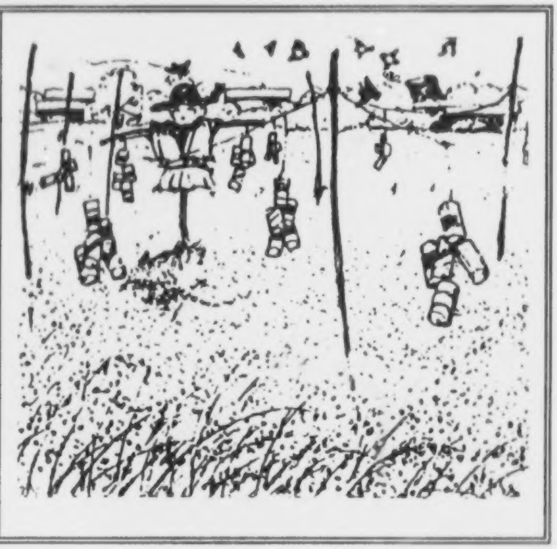
Rice paddies are weeded
keep them free of
undesirable plants.

PLANTING RICE SEEDS (continued)



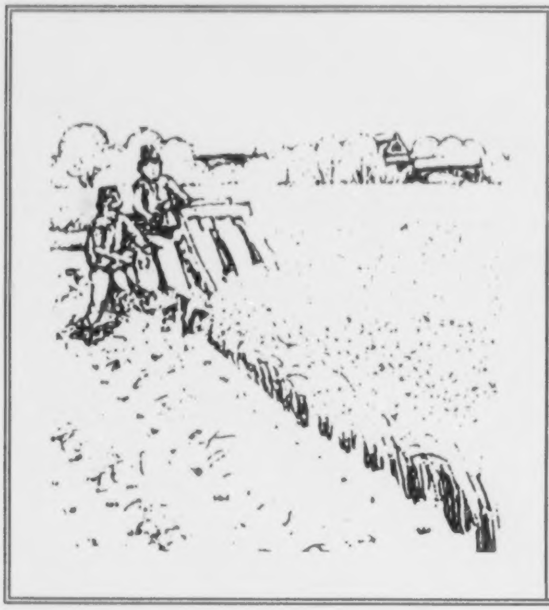
5. June - July

Rice needs plenty of water and sunshine.



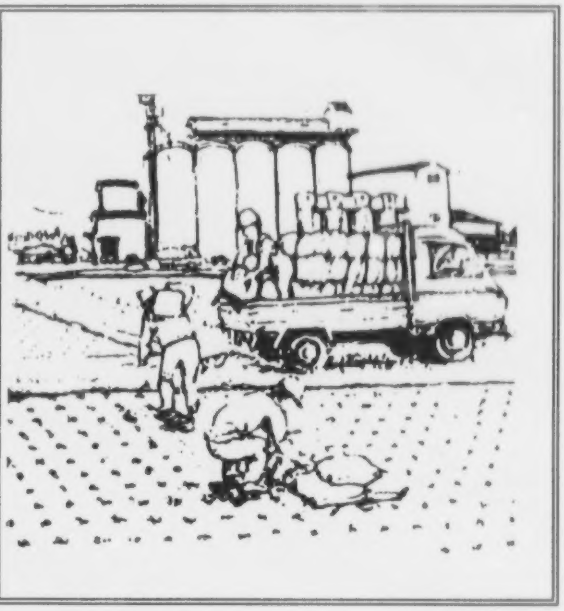
6. July - August

The rice paddy is bird heaven.



7. August

Machines harvest and thresh the rice.



8. September

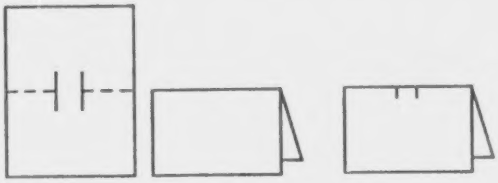
At the mill, the rice is dried, hulled, and packaged.

PARTS OF THE RICE PLANT

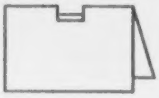
Have each child in your classroom make a POP-UP book to represent the parts of the rice plant. Use the pictures that have been provided on the following pages. On the last pop-up, have the children draw their favorite way to eat rice.

Directions for pop-up pages: (Make as many as you need.)

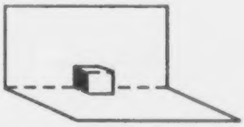
1. Take a sheet of paper. Fold it in half and cut as shown.



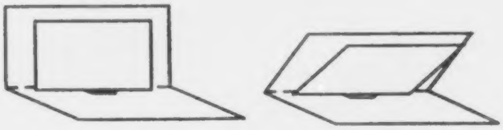
2. Fold the tab back and forth several times.



3. Open the paper and push the tab to the reverse side.

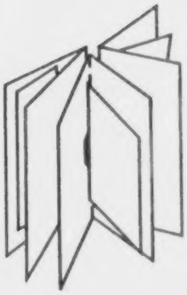


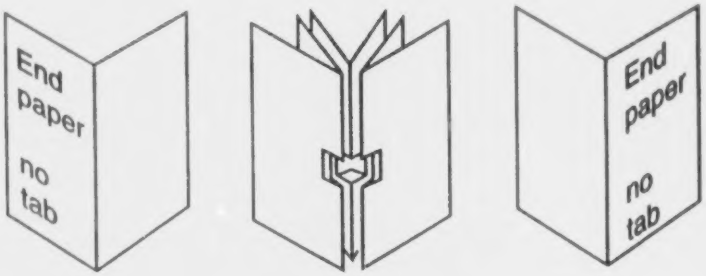
4. Paste a picture to tab. (Put the paste on the tab, not the picture.)



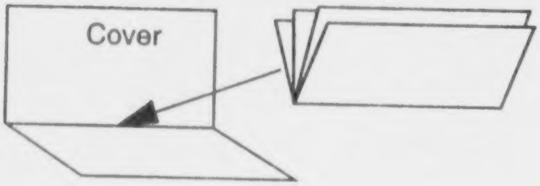
Follow these directions to bind the book together:

1. Glue the pictures back-to-back being careful not to get too near the tab. Add a blank page to the front and to the back to serve as end papers.

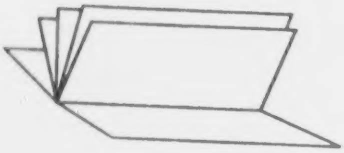




2. Cut a cover from colored paper (or tag) slightly larger than the pop-up pages. Score the center and fold. Rub firmly.



3. Paste the end papers to the cover.



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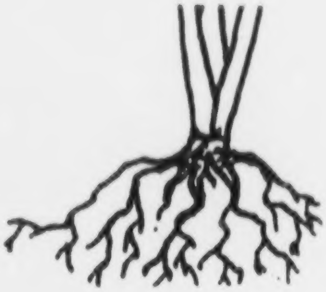
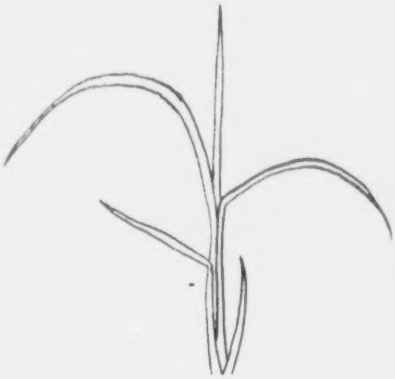
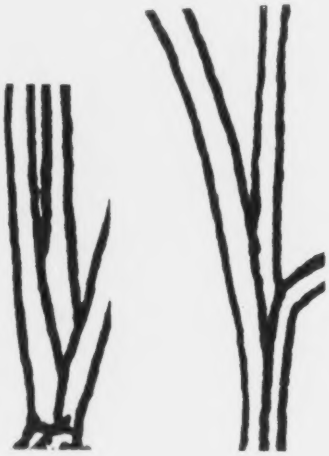
PARTS OF A RICE PLANT



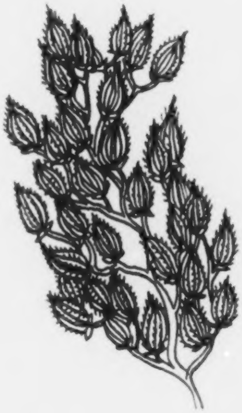
Roots



Leaves

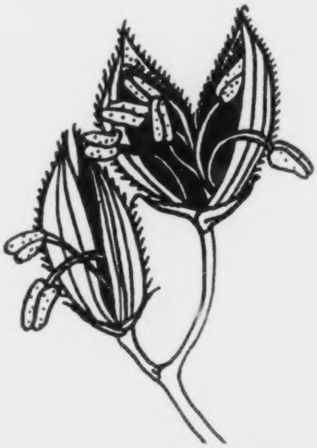


Stem

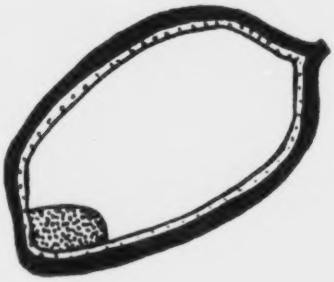


The head of a rice plant is called the panicle.

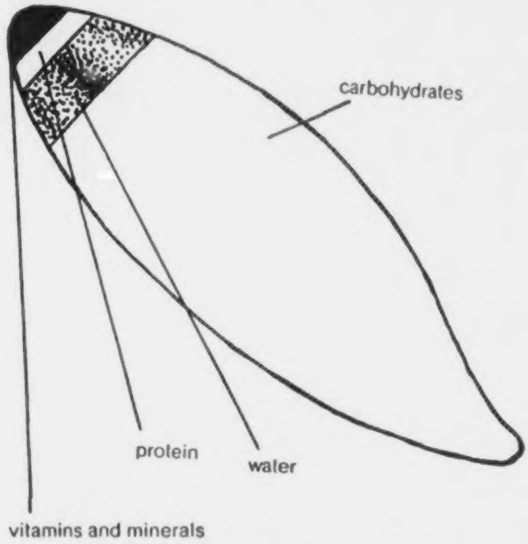
PARTS OF A RICE PLANT (continued)



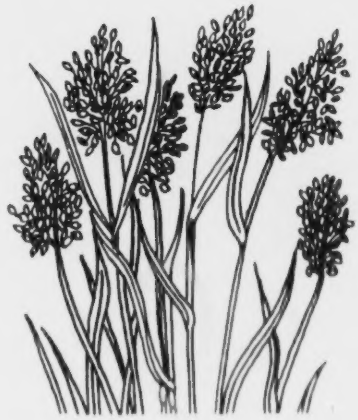
The panicle has small flowers called spikelets that produce the grains of raw rice.



A rice grain


carbohydrates
protein
water
vitamins and minerals

The substances found in a grain of rice.

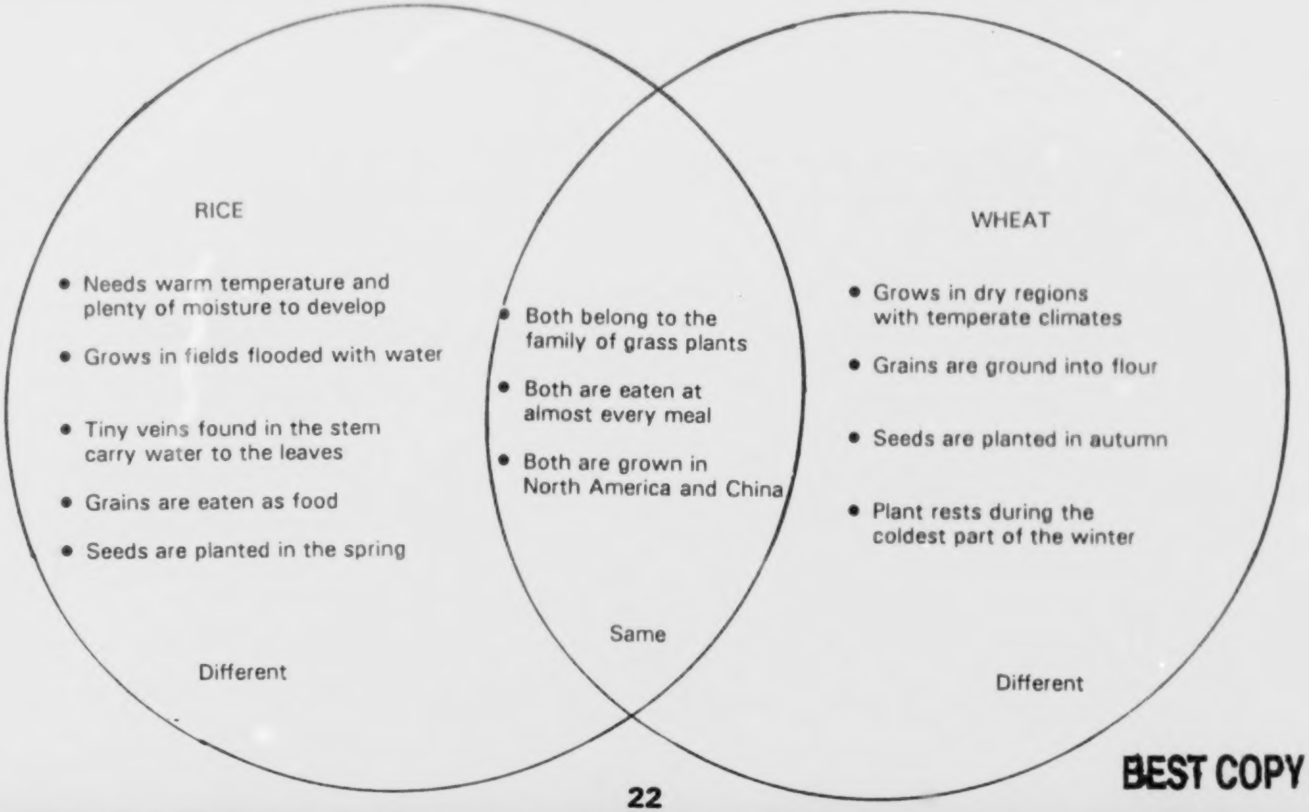


A rice plant

A 2-WAY VENN DIAGRAM

A Venn diagram is an illustration that compares and contrasts two different things. This diagram consists of two overlapping circles (see example below). The overlapping space in the center contains ideas or statements that are true for both things being compared. Each outer circle lists characteristics that belong to one of the items only.

Talk about the similarities and differences between rice and wheat. Decide as a class which things are similar and write them in the part labeled same. Put the other items in the correct circle. Help students put the phrases into complete sentences. Organize these sentences into a paragraph that compares and contrasts rice and wheat.



RICE

- Needs warm temperature and plenty of moisture to develop
- Grows in fields flooded with water
- Tiny veins found in the stem carry water to the leaves
- Grains are eaten as food
- Seeds are planted in the spring

Different

- Both belong to the family of grass plants
- Both are eaten at almost every meal
- Both are grown in North America and China

Same

WHEAT

- Grows in dry regions with temperate climates
- Grains are ground into flour
- Seeds are planted in autumn
- Plant rests during the coldest part of the winter

Different

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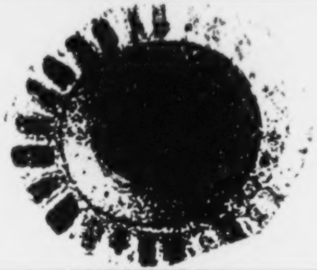
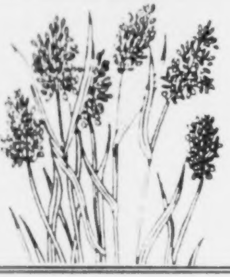
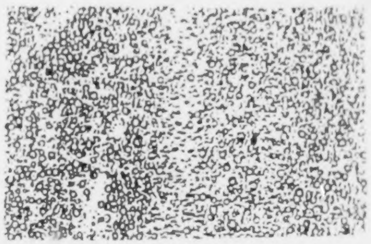
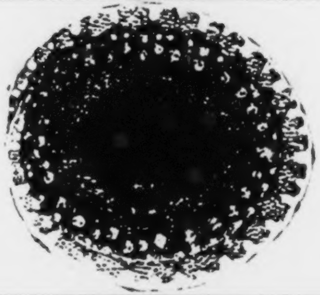
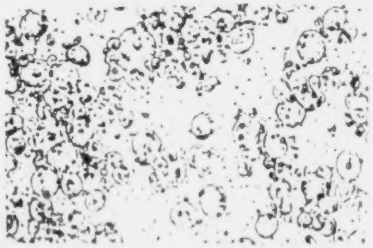
COMPARE AND CONTRAST

RICE	RICE	RICE
		
A cross-section of the stem of a rice plant. The stem is hollow. The veins that run through it are clustered in bundles that are scattered throughout the stem tissue.	Rice plants need warm temperature and plenty of moisture to develop. They are grown in fields flooded with water.	This photograph taken through a microscope shows particles of carbohydosperm of a grain of rice.
WHEAT	**WHEAT**	**WHEAT**
		
The stem of a wheat plant is solid and its bundles of veins are arranged in a circular pattern around the outside edge of the stem.	Some kinds of wheat require weeks of below-freezing temperatures in order to produce grain. During the coldest part of the winter, the wheat goes into a resting state. The wheat doesn't grow and the plants live in stored food.	Endosperm is a storehouse of carbohydrates and other kinds of nutrients. It is this stored food in the grain that makes wheat products like bread and noodles such a nourishing part of the human diet.

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EARLY HISTORY OF RICE

No one really knows exactly where the first seeds of rice originated. The species Oryza sativa probable grew in Southeast Asia and Oryza glaberrima probably grew in West Africa, so early rice seeds were most likely present on both continents for many years. There could very possibly have been a common ancestor of these two species, which no longer exists.

Archaeologists have found carbonized grains of rice dating as far back as 3000 B.C., but the first written record of rice was discovered in an old Chinese manuscript, dated about two hundred years later. At that time, rice was an important enough food to be considered holy, and the emperor outlined a plan for the ceremony that everyone was to follow when planting rice seeds.

Nomads are people who wander about from place to place. Nomads in India, while hunting for food, may have learned that wild rice plants could be cultivated. Some historians think that rice originated in India. They believe that rice culture spread to other countries as Indians migrated and traveled.

As we know, rice needs huge amounts of water in order to grow, and the first cultivated rice depended on nature for the rains to nourish it. The delta lands have periodic overflows from rivers, which provide an almost regular water supply. Therefore, rice was probably first grown in the fertile low delta lands of rivers. The rich valleys of the Indus and Ganges rivers in India contain millions of people whose staple food is rice. Many authorities believe that wild rice may first have been cultivated in Bengal, a region in northeastern India and East Pakistan.

When the Indians stopped wandering and settled in permanent communities, they developed the art of shipbuilding and became good sailors. As they traveled to trade, they brought their rice with them. They sailed the Indian Ocean, and it is possible that they exported their rice culture to Ceylon. They probably also brought their rice culture to Burma, where the delta of the Irrawaddy River is one of the lushest rice-growing areas in the world. Rice culture probably spread, along with Buddhism, through the Asian countries and to the islands of the Pacific.

China has had an advanced civilization for centuries. Southern China is also strongly Buddhist and shows Indian influence. It is possible that rice was brought to China by Indian immigrants.

In China, there are two very long, winding rivers that flow through acres and acres of land. The Chinese have long used the waters of these rivers to their advantage. They have known the art of irrigation for centuries, and had developed a sophisticated system of dams and aqueducts long before the discovery of America.

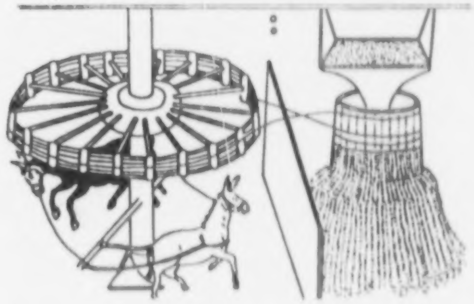
The Huang He River flows through lands often flooded by monsoon rains. Its overflow carries along rich silt, which is deposited in the low-lying areas, creating fertile beds in which rice can grow and flourish. The Chinese were able to farm and grow surplus crops. This allowed them leisure time to develop one of the world's great civilizations. Rice is still the most important crop in China. When rice crops are poor, millions of people go hungry or die of starvation.

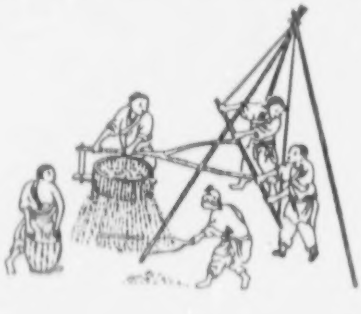
Alexander the Great invaded India in the fourth century. When his troops returned home, they brought rice back to Greece. It is still an important crop in Greece and the surrounding countries of southern Europe.

Rice may have been brought to Africa by Indian sailors, but many scientists believe that it developed independently in Madagascar. By 1500, the rice culture was well developed on the island, and English merchants were regularly importing rice from there. The English wanted to keep as much profit as possible from their rice trade, so the crop was carried in rough paddy form to England, where it was finished in English mills. After the grain was polished, the English traded it on the world market.

At times, weather on the Atlantic Ocean can be very hazardous, and often there are violent storms of hurricane force. In the late 1600's, a ship sailing from Madagascar to England, with a cargo of rice paddy in its hold, was blown off course in a gale. Seeking a safe port, the ship came limping into Charleston (South Carolina) harbor, where it remained until the necessary repairs were made.

The people of Charleston were very kind to the ship's crew. In appreciation, the captain presented them with packages of rough rice which were stored in the hold. The colonists planted the grains, and that is how the rice industry in America got its start.

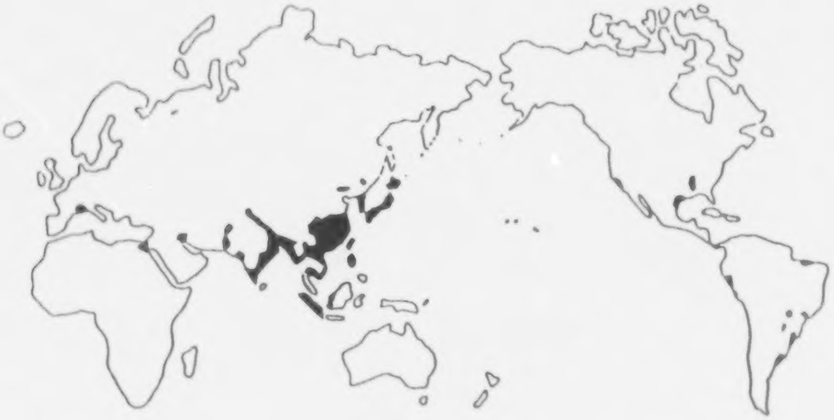




▀ 礱磨（採《農政全書》）
▄ 畜力礱磨（採《農政全書》）

SOME FACTS ABOUT RICE

- Today, over half the world eats rice as its main food.
- Nine out of ten sacks of rice grown in the world come from Asia. Asian people keep most of that rice for themselves.
- American states that grow rice include Texas, Louisiana and California, but the largest crop is in Arkansas. Rice is exported far around the world from the United States.



■ Rice cultivation

Have cooperative learning groups trace the route of the rice. Give each group a copy of the world map on the following page. Have them trace the route with crayons or marking pens.

Selected References

1. Brice, R. (1991) *Rice: The Little Grain that Feeds The World*. Ossining. NY: Young Discovery Library.
2. Dooley, N. (1991) *Everybody Cooks Rice*. Minneapolis, MN: Carolrhoda.
3. Johnson, S. (1985) *Rice*. Minneapolis, MN: A Learner Natural Science Book.
4. Merrison, L. (1989) *Rice*. Minneapolis, MN: Carolrhoda.

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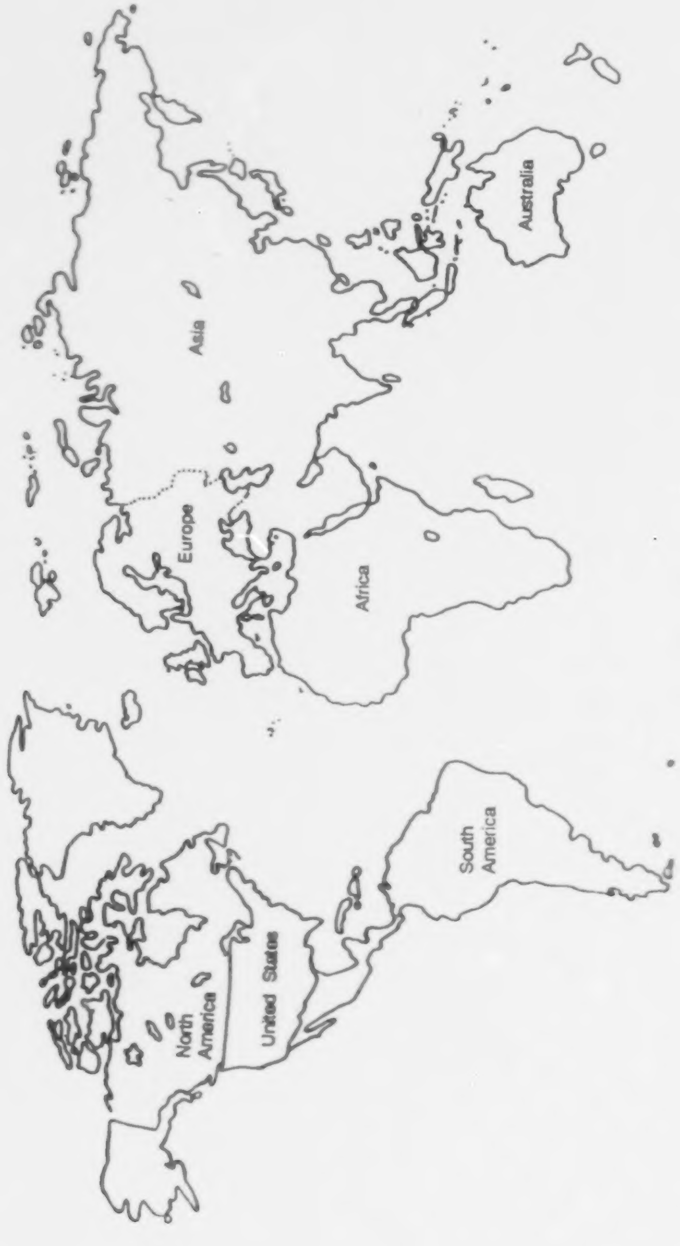
Directions: Trace the route of rice from Asia to Africa and America.

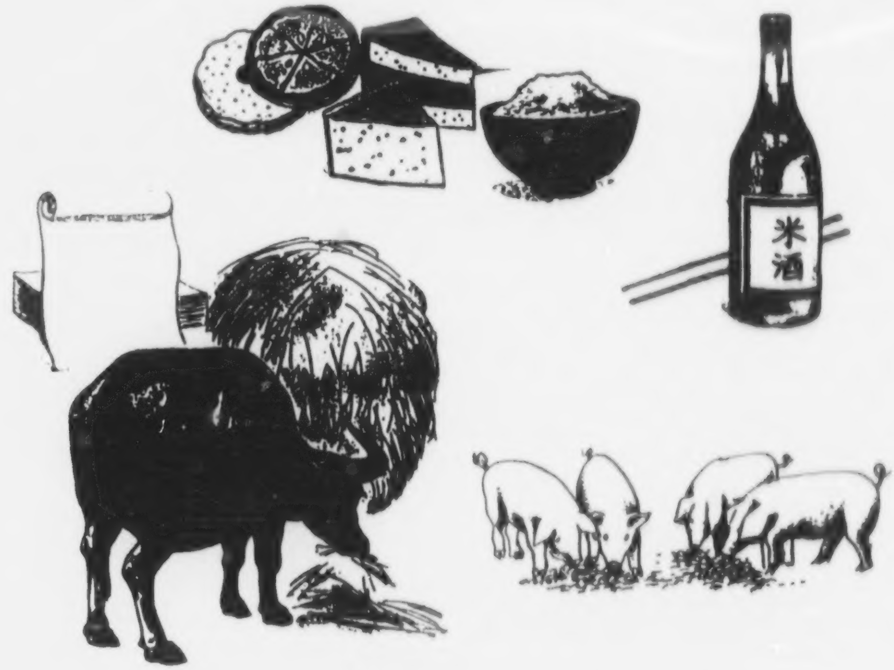

North America
United States
South America
Europe
Asia
Africa
Australia

BY-PRODUCTS OF RICE FARMING

There are some commercial uses for different parts of the rice plant. The by-products vary from powder to rice plywood, and these industries provide work for many people. Men and women are needed to work in the rice mills, in storage buildings, in rice dryers, for irrigation companies, to sell and service farm equipment, as laboratory workers and scientists who are interested in rice research, as writers for food or nutrition magazines, as teachers in agricultural colleges, in cereal manufacturing, as airplane pilots who spread seed and fertilizers, and as manufacturers and salesmen of chemicals, such as insecticides and fertilizers.

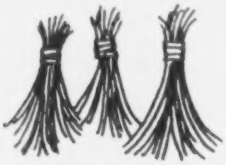
These are some by-products of the rice industry:

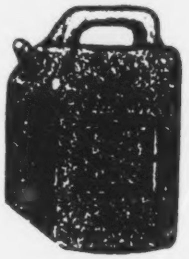
- **Broken rice** is used in the brewing business to make beer.
- **Rice flour** is used in the manufacture of some baby foods and as a thickener in some canned goods. It is used in place of wheat flour in foods prepared for people who have certain food allergies. It is also used in commercial bakeries to dust loaves of bread before they go into the oven.
- **Rice hulls** are used in certain polishing operations. They are used as roughage in animal feed, as a source of fuel, in the manufacture of soap, and in construction materials.



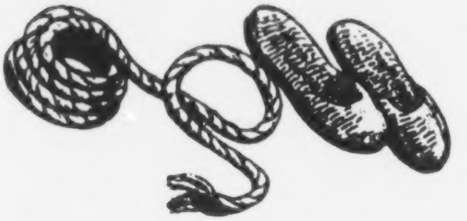
BY-PRODUCTS OF RICE FARMING (continued)

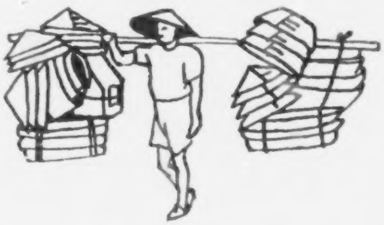
- **Rice husks** are used as packing materials, as litter for poultry, and to insulate buildings.





- **Rice oil** is high-grade edible oil extracted from rice bran, which has proven to be a fine, low-fat cooking oil.
- **Rice straw** is made into sleeping mats, rope, handbags, sandals, walls, roofs, brooms, and paper. The straw is used for the sun hat the rice farmers wear.





- **Rice wine, or sake,** is made from good quality milled rice, and is the national alcoholic beverage of Japan.
- **Starch** made from rice is used in laundering.

An important source of additional income for the rice farmer, as well as a necessary protein-rich food for his family, is the growing of fish in the paddy fields. Fish-farming is carried on extensively in many rice-growing countries, but it is not suitable to all types of rice fields. They must have a good system of irrigation and an even water supply. Those who farm-fish must use fish that can live in shallow water, because the water in the paddies is not usually very deep.

* **Make a semantic map.** Brainstorm things that are made of rice.

Mathematics Connection

- Set up a rice measuring station in your mathematics area. It's especially fun to have some colored uncooked rice, dyed with food coloring. Put out many different sizes of cups, scoops, plastic containers, and measuring implements so that the students can do lots of measuring and comparing. Fill several different sizes and shapes of jars with rice, and have the children estimate how much rice is in each jar. Show the children a small amount of uncooked rice, and have them predict how much rice there will be when it is cooked. Cook the rice, measure, and check the predictions.

MAKING CHINESE SWEET CAKES

Because of Ox's mistake, the peasants enjoyed warm rice, tender vegetables, and Chinese sweet cakes three times a day. These sweet cakes are baked in molds and coated with an egg-yolk glaze to give them a shiny look. The traditional sweet cakes, also called "moon cakes," are quite difficult to make. But your students might enjoy this cookie version of a Chinese sweet cake. Make these cakes with your class and enjoy.

INGREDIENTS

- 1 cup (250 ml) softened butter
- ½ cup (125 ml) powdered sugar
- 2 tsp (10 ml) vanilla
- 1 cup (250 ml) ground blanched almonds
- 1-½ cups (375 ml) flour

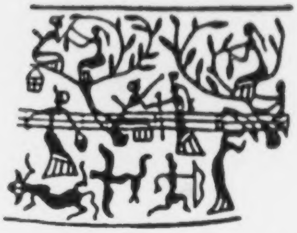
DIRECTIONS

Cream butter and gradually add sugar. Blend in the vanilla and almonds. Slowly knead in the flour. Refrigerate the dough until chilled. Then roll the dough out on a floured surface and cut into cookie shapes. Bake on a greased cookie sheet at 350°F (180°C) for 15 minutes.

SMOOTH AS SILK

MATERIALS

- silk fabric swatches
- assorted fabric swatches
- paper bag



战国铜器上
的采桑图

The oxen who lived in the Imperial Palace were clothed in the robes of the finest silk. The Chinese are famous for the quality and beauty of their silk fabrics. In fact, for many years, the Chinese alone knew that silk was made from the cocoons of tiny silkworms. About 8 to 9 days after a silkworm has spun a cocoon, the cocoons are unwound by hand. Each cocoon is made of a thread that is over 200 feet long. About 5 to 8 of these fine threads are twisted together to make one thread. The silk threads are then woven into cloth.

Bring in several swatches of fabric, including silk. Invite students to compare the textures. Put several swatches of fabric in a paper bag. Invite students to identify the silk swatch by using only their sense of touch.

THE SILKWORM GODDESS

An old legend says that the secret of that glistening fiber was discovered by the Chinese empress, Si-Ling-Chi. Si-Ling-Chi was the wife of a mighty emperor who ruled over ancient China.

One day the empress was walking under the mulberry trees in the palace garden. She looked up into the green branches, and she noticed strange little white cocoons fastened to the twigs.

She bent one of the branches down and saw a fat white caterpillar at the end of a twig slowly moving its head to and fro. She watched for a long time, and she saw that the caterpillar was spinning a thread as fine as a cobweb and was winding it around and around its body.

Very gently, she pulled off one of the little round cocoons. She tried to unwind the fine cobweb-like thread of which it was made. She worked for a long time, and at last was able to loosen one end of the shining thread.

Day after day, she unraveled the cocoons that she found in her garden until she had enough of the silken fibers to spin together into a thread. Then, from this thread she wove a piece of cloth more beautiful than any cloth she had ever seen. So the secret of silk was discovered, and the empress, Si-Ling-Chi, became known as the "Goddess of the Silkworm."

The Chinese guarded their secret very carefully for twenty-five hundred years before it was discovered how this strange, gleaming material was produced.

OTHER COUNTRIES LEARN THE SECRET

One of the first countries to discover the secret was Japan. Four Chinese maidens, who lived in a silk-making province of China, were carried off from their homes and taken to Japan. These four Chinese girls taught the Japanese how to care for the silkworm and how to unwind the cocoons.

India was also one of the first countries to discover the secret. The story is told of a Chinese princess who married a prince of India. When she left her own country, she hid a few eggs of the silkworm and a few shoots of the mulberry tree in her high, jeweled headdress and carried these with her. Then she taught her new people how to cultivate the silkworm.

In both China and Japan beautiful embroidered silks were made, as well as beautiful woven materials. Flowers, clouds, birds, and dragons were embroidered in gold or in silken threads of many colors.

For more than a thousand years, no one but members of the Chinese royal family was allowed to wear silk. Later certain colors of silk could be worn only by noble families. Their rank was shown by the design that was embroidered on the robe and by the amount of material used. Long, flowing sleeves of silk reached far below the hands of the very great nobles.

Then, about 1200 B.C., officials of lower rank than the nobles were permitted to wear garments made of silk. And soon after that, silk cloth was sold in the marketplace.

China was the first "silk shop" of the world. Traders and merchants carried her materials to faraway lands. Kings and princes paid immense prices for her silken fabrics.

THE SILKWORM'S LONG JOURNEY

The Roman emperor, Justinian, had a court of great splendor and magnificence in Istanbul, at that time called Constantinople. The emperor and his nobles dressed in robes of silk, and in order to have plenty of this costly material, the emperor was eager to produce it in his own land.

It happened that two Persian monks who had lived in China came to the court of Justinian. As soon as the emperor learned that these two men knew the secret of the silkworm and its care, he offered them a rich reward if they would venture into China and bring him a few of the precious silkworms.

The two monks set out on the long, dangerous journey. They were risking their lives, because the Chinese would kill them if they discovered that they were taking the priceless silkworms. Many moons passed while Justinian impatiently awaited the return of the monks.

At last, one day they appeared again in Constantinople. They were dressed in rags, with noting but long staffs in their hands. But hidden away in each hollow bamboo staff were the eggs of the silkworm and the shoots of the mulberry tree.

Great attention was given to the raising of the silkworm by the emperor Justinian, and so Constantinople soon became a great silk trade center. Under Justinian, the production of silk ceased to be a secret, however, and about fifteen hundred years ago, the people of Europe learned how to make silk.

THE CLOTH OF KINGS

The nobility and the wealthy dressed in gorgeous robes of silk and velvet. Rich fabrics were made to adorn churches and palaces. The gloomy walls of the palaces were covered with silk hangings, and the beds were draped with heavy patterned silks called "brocades."

The first country in Europe to become famous for introducing silk was Italy. Textiles beautiful in design and rich in color were woven by the skillful Italian artists and craftsmen.

Later, the French kings encouraged the silk industry. In parts of France, mulberry trees were planted, and the culture of the silkworm began. The weavers of France became famous for the many beautiful textiles which they created.

Italy, Japan, China, France and India are still very important silk producers. But the rich silken materials that once were woven in small workshops on handlooms are today woven in factories on great power-driven looms.

- Have cooperative learning groups trace the silk route.

Give each group a copy of the world map. Have them trace the route with crayons or marking pens.

SILKWORM

The Chinese silkworm that makes the beautiful fiber of silk belongs to a family of moths. Its real name is *Bombyx mori*, and it lives on the tender leaves of the white mulberry tree.

1. The Egg Stage

The life of a silkworm has four distinctly separate and very different parts or stages of growth. The first part is the egg. Each female moth lays three or four hundred eggs in her lifetime.

2. The Larva Stage

In time, tiny, fuzzy black "worms", or larvae, hatch from the eggs and begin the second part of their lives. These baby caterpillars, with their sixteen legs, do nothing during this stage of their lives but eat and grow. They eat so much and grow so fat that they finally grow too big for their skins. They outgrow their skins four times, and each time, just at the right moment, the outer skins split open, and the larvae wriggle out, covered with soft, new skins.

After about forty days, the larvae are fully grown. Now they are smooth and cream-colored, and are about three and one-half inches long. They are no longer hungry, and they want nothing more to eat. They are ready to spin the round silken cocoons in which they will sleep during the third part of their lives.

The cobweb-like thread of silk with which the worm builds its cocoon comes from inside its own body. The gummy, half-liquid silk is forced out from two openings underneath the mouth. This sticky substance hardens into a thread as soon as the air touches it.

Around and around its body, the worm winds this silken thread. At last it is completely covered. It has taken three or four days, or more, to build itself this house of silk.

3. The Chrysalis Stage

For about two weeks, the worm sleeps. During this time it is called a "pupa" or "chrysalis," and, hidden in the cocoon, it changes into a moth.

4. The Moth Stage

At last, the change is finished, and now, as a moth, the silkworm is ready to begin the fourth part of its life. It breaks open one end of the cocoon and pushes its way out. At first it looks wet and bedraggled, but soon it stretches out and dries its wings. Then for the rest of its life it is a beautiful, creamy-white butterfly.

The silk moths have been cared for and kept in one place for so long that they almost do not know how to fly. They live only where they are raised for their silk. They never eat, and they are alive but a few days.

After mating, the female moth lays her many eggs, and soon afterwards she dies. Then, with these eggs, the same story starts all over again.

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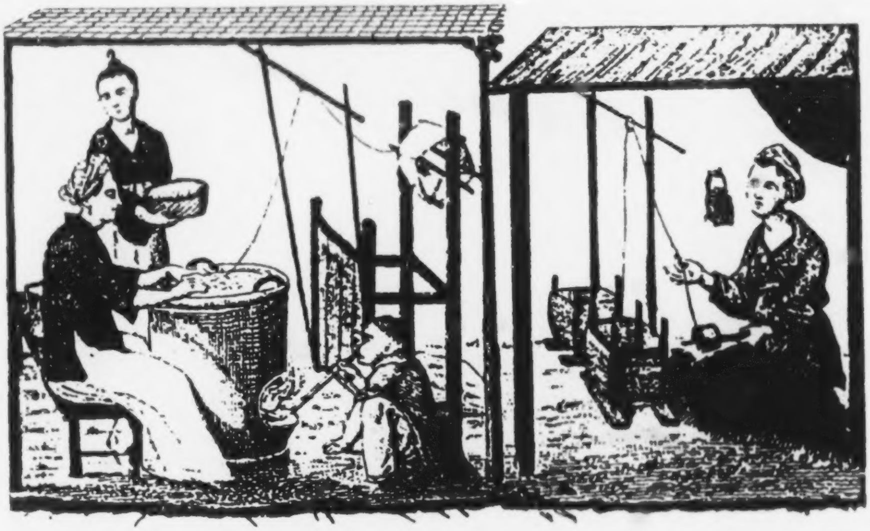
LIFE CYCLE OF THE SILKWORM

Have each child in your classroom make an accordion book to represent the life cycle of the silkworm, using pictures on the following pages (see directions on page 42 on how to make an accordion book).

Note: Live silkworm eggs are available from Mid-March through September from:

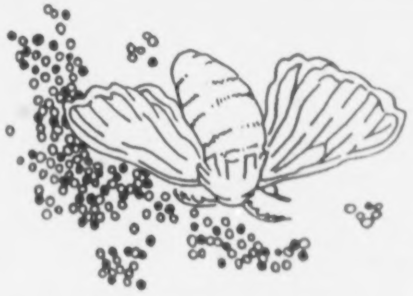
Insect Love
P.O. Box 1535
Shafter, CA 93263
1-800-LIVE BUG



REELING OF THE COCOONS
This 19th-century Chinese engraving shows the thread being transferred onto smaller bobbins. Today, silkmaking is more mechanized, but the basic process remains the same.

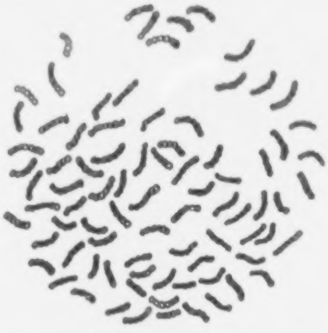
LIFE CYCLE OF THE SILKWORM

1.



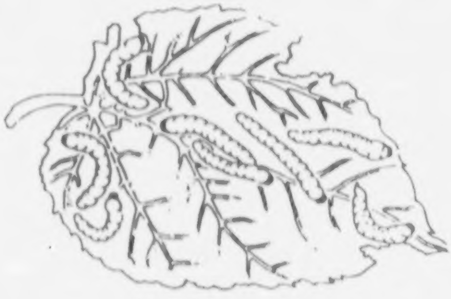
Adult Moth Laying Eggs

2.



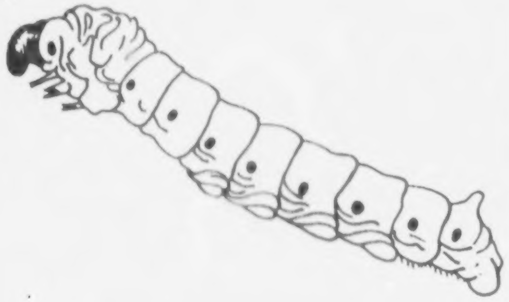
Baby Worm

3.



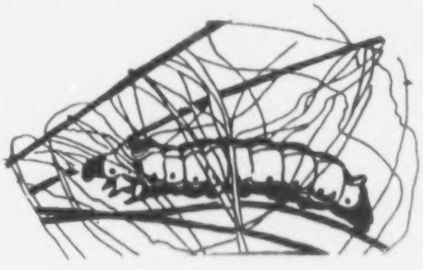
Half-grown Worms

4.



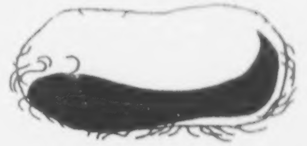
Full-grown Worms

5.



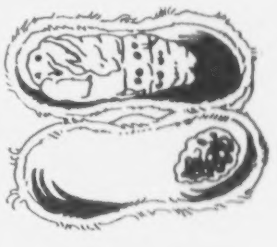
Worm Spinning its Cocoon

6.



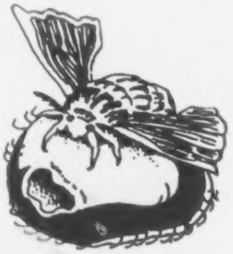
Cocoon

7.



Chrysalis in Cocoon

8.



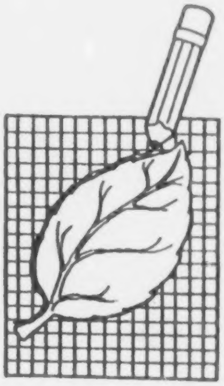
Moths Emerging from Cocoon

A SILKWORM'S MEAL

Find out how much of a mulberry leaf a silkworm can eat in one day by following the step-by-step directions in this simple experiment. This experiment can be done in pairs or small groups.

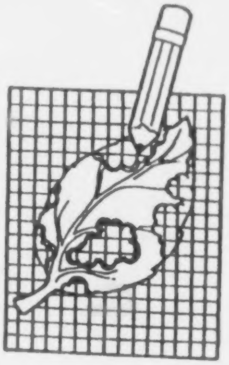
MATERIALS

- a silkworm
- a box (preferably with a screen top)
- a large mulberry leaf
- two different colored markers
- pencil
- copy of graph paper

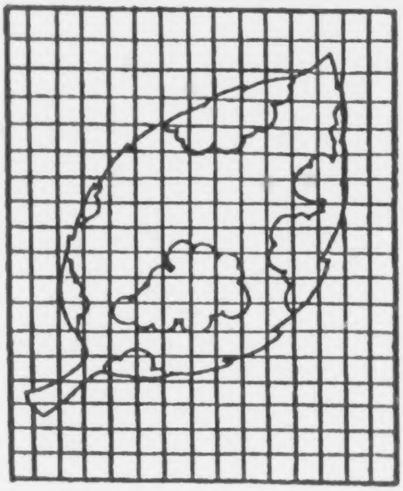


DIRECTIONS

- Place the mulberry leaf onto the graph paper. Trace around the leaf with one of the markers.
- Put the mulberry leaf in the box with the silkworm. Be sure to close the lid of the box.



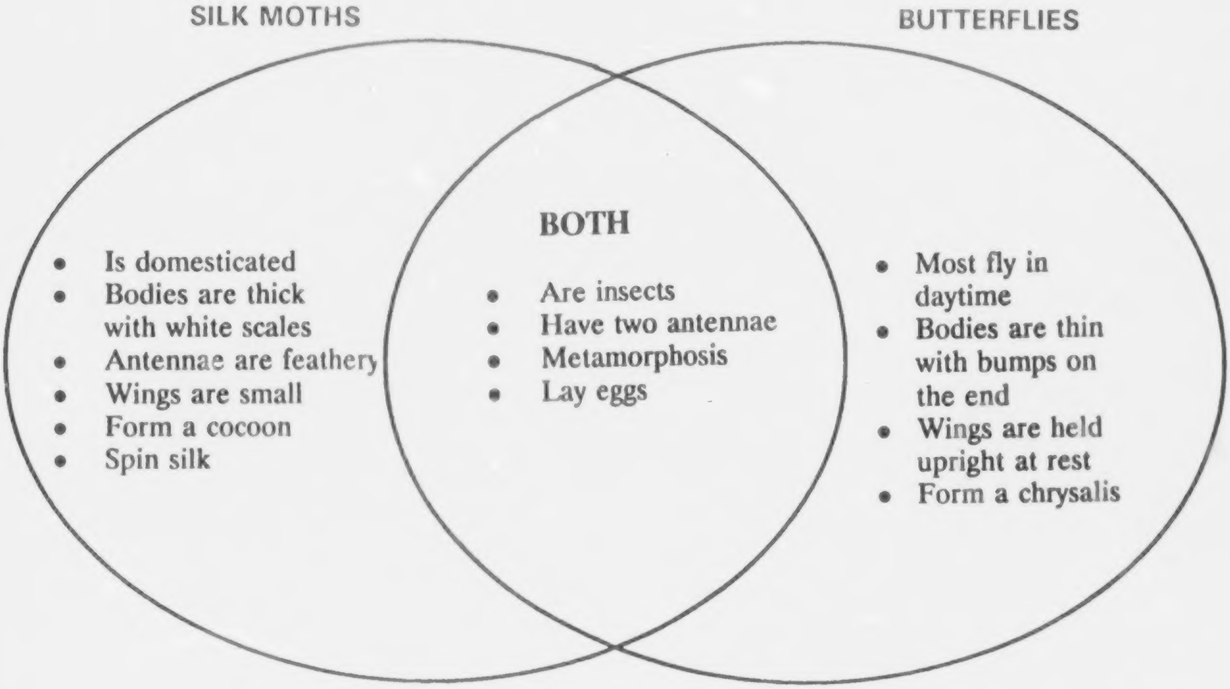
- **Hypothesis:** A silkworm can eat between _________ and ________ square centimeters of the mulberry leaf in one day.
- Wait until the same time the next day to take the mulberry leaf out of the box.
- Lay the mulberry leaf over the graph paper tracing you made the day before. Using the other color marker, trace around the places where the leaf has been eaten.

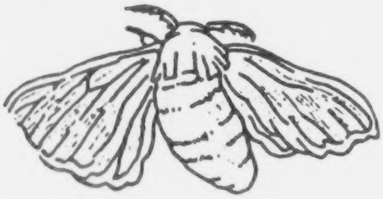


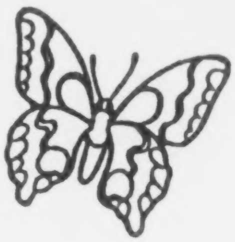
- Fill in the space to show how much of the mulberry leaf is now gone.
- Count the number of squares that are in the area that the silkworm ate. A square that is more than half covered should be counted as a whole square. If a square is less than half covered, do not count it at all.
- **Result:** The area eaten by the silkworm was ____________ square centimeters.

MAKING A VENN DIAGRAM

Compare silk moths and butterflies. They are alike because they are insects, have two antennae, undergo metamorphosis, and lay eggs. They are different in many ways: moths are white-colored, while butterflies are brightly-colored; silk moths spin silk, but butterflies do not; silk moths pupae live in a cocoon while butterfly pupae have a chrysalis. Information like this can be assembled in a more graphic and legible way by using a Venn diagram as shown in the illustration below.


SILK MOTHS
BUTTERFLIES
BOTH
• Is domesticated
• Bodies are thick with white scales
• Antennae are feathery
• Wings are small
• Form a cocoon
• Spin silk
• Are insects
• Have two antennae
• Metamorphosis
• Lay eggs
• Most fly in daytime
• Bodies are thin with bumps on the end
• Wings are held upright at rest
• Form a chrysalis





ACCORDION BOOKS

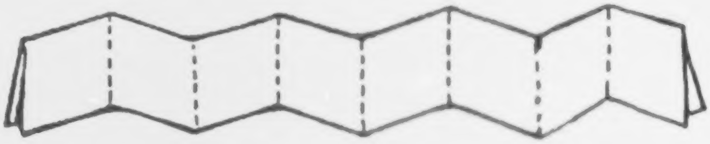
MATERIALS

- butcher paper
- cardboard or tagboard
- writing paper
- crayons, marking pens, or any other art supplies needed to make illustrations

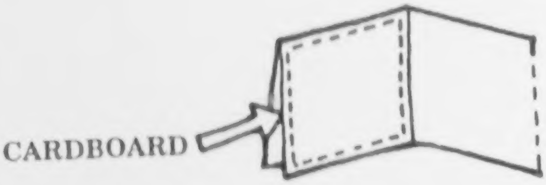
DIRECTIONS

1. Fold butcher paper in half lengthwise for strength.

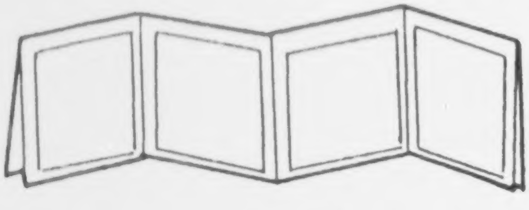
2. Divide and fold the paper into eight (8) sections.



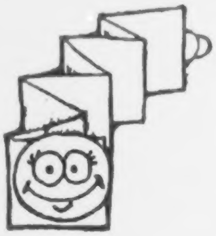
3. Insert a piece of tagboard or cardboard into each end to make the book stand up easily. Tape the ends together.



4. Put the text and illustrations on separate paper. Glue one page to each section of the accordion book.

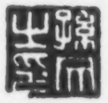


5. Give the accordion book more character by making a shape cover. Attach a silkworm face to the front of the cover.



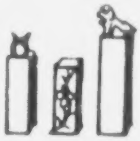
A SPECIAL SIGNATURE - THE CHOP

The traditional Chinese way of signing one's name is stamping a personal chop on the paper. Chop imprints in red ink are found on Chinese paintings, the seal of the artist or collector.



Dr. Sun Yat-Sen's Signature

The Chinese signature seals are made of ivory, soapstone or bamboo. In Imperial China, the favorite material was jade.



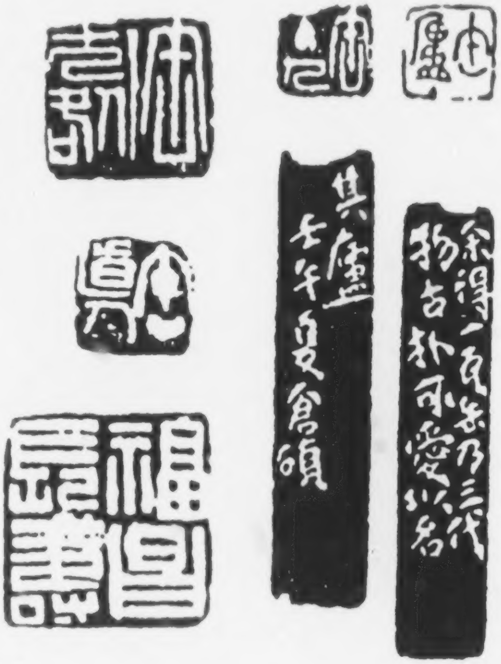
There are shops in the United States that make Chinese chops to order.

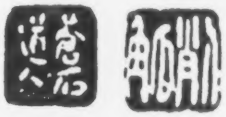
Chops come in different designs and styles.

- Make your own chop. Carve your initials or Chinese name on the gum erasure a use it like a rubber stamp.

When you have chosen your official chop, mark it with the special symbol (   ) in the lower left-hand corner.

- Have children ask their parents if they have stamps with their names on them. If they do, ask them to send a sample to school. Rubber stamps with letters and pictures are widely available. Provide a variety of stamps and red ink pads for children to use. Children also enjoy looking for the chop prints on authentic Chinese artwork and materials.





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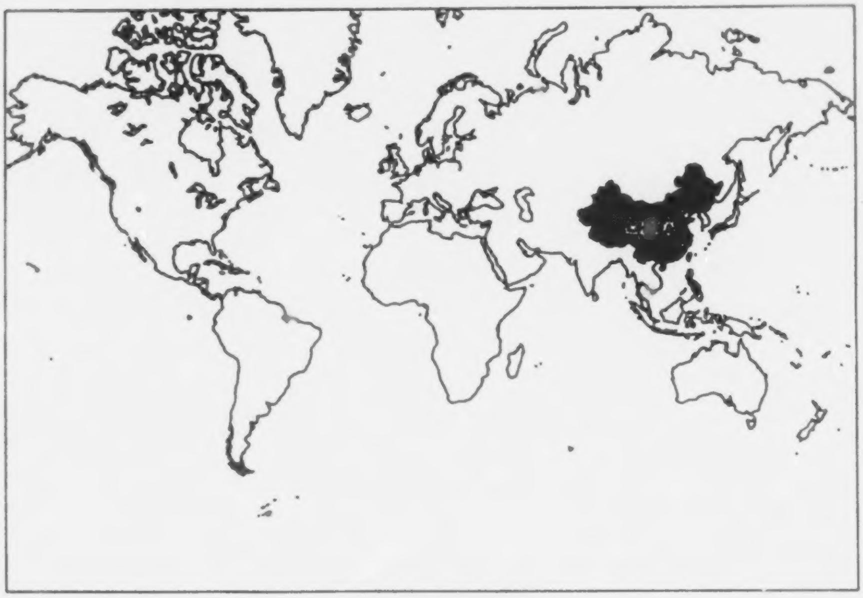
THE RIVER DRAGON

Written by Darcy Pattison and Illustrated by Jean and Mou-Sien Tseng
New York; Lothrop, Lee & Shepard, 1991



Synopsis

Ying Shao must make three dangerous trips across the River Dragon's bridge to attend a customary banquet held by his Bride-to-be's family. Swallows are served as the main course and everybody knows that dragons love swallows. How will Ying Shao get past the River Dragon with swallows on his breath?

Background

The dragon is a symbol of China, but it also has many other symbolic meanings. According to ancient legend, the dragon is the god of rain. It is believed that dragons live in seas, rivers, and lakes and are responsible for rainfall. Darcy Pattison drew on authentic details of Chinese dragon lore when she created this original folktale.

THE DRAGON

The Eastern dragon is a paragon of strength and goodness and represents life itself. As it covers itself with mud in autumn, then emerges and climbs to the skies in spring, it has become symbolic of the spring season. It is an emblem of vigilance and protection.

The **Long** is the most powerful dragon, its home being in the sky. It displays characteristics common to nine (9) other creatures:

the head of a camel
the horns of a deer
the eyes of a rabbit
the ears of a cow
the neck of a snake
the belly of a frog
the scales of a carp
the claws of a hawk
the palm of a tiger.

The dragon can be described precisely, having 81 scales in a ridge along its back, whiskers on each side of its mouth and a beard hiding a bright pearl. It is deaf (which is why deaf people are called **long**), and its breath can change from water to fire. There are nine decorative sub-species of dragons, each with its own special characteristics, specially used on carved artifacts.

Dragon Name	Characteristics	Used for carving on:
P'u-lao	cries loudly when attacked	tops of bells and gongs
Ch'iu-niu	taste for music	the screws of fiddles
Pi-hsi	fond of literature	top of stone tablets
Pa-hsia	supports heavy weights	bottom of stone monuments
Chao-feng	likes danger	the eaves of temples
Chih-wen	fond of water	beams of bridges
Suan-ni	likes resting	Buddha's throne
Yai-tzu	lust for slaughter	sword hilts
Pi-kan	likes litigation and quarreling; very fierce	prison gates

The round red object which always appears in dragon paintings has been described over the centuries as: the sun, the moon, the symbol of rolling thunder, the egg of nature, the pearl of potentiality or "the night-shining pearl," which is a ruby. Since 206 BC, the 5-clawed dragon has been the emblem of imperial power. The Dragon

Boat Festival, held on the 5th day of the 5th month, is an occasion of great splendor, with boats measuring about 125 feet in length and having 60 or more rowers.

There are no objects of Chinese art or artifacts on which the dragon does not customarily appear. Even in the twentieth century, it is one of the most important symbolic elements in Chinese life.

DRAGON HUNT

MATERIALS

- animal pictures
- glue
- construction paper
- Emma's Dragon Hunt by Catherine Stock
- lined paper
- pencil

Ask students to describe what the dragon in the story looked like. Point out that Chinese mythical dragons were often depicted as being parts of many different animals put together. The River Dragon had the head of a camel, horns of a deer, eyes of a demon, ears of an ox, neck of a snake, scales of a carp, palms of a tiger, and claws of a hawk. Provide children with pictures of animals cut from magazines. Invite children to use an assortment of animal parts to create their own mythical dragon creatures. Display the pictures around the room.

Then read Emma's Dragon Hunt by Catherine Stock. Invite students to imagine that their dragon has gotten lost and they are going on a hunt to find it. Invite students to write or dictate a description of their dragons. For example, a child might describe his or her dragon as having the head of an elephant, the neck of a giraffe, and the eyes of an eagle. Invite each child to read or tell about his or her dragon. Challenge other students to "hunt" for the picture that matches the description.

DRAGON MURAL

Study dragon designs. Have children make a dragon mural.

MATERIALS

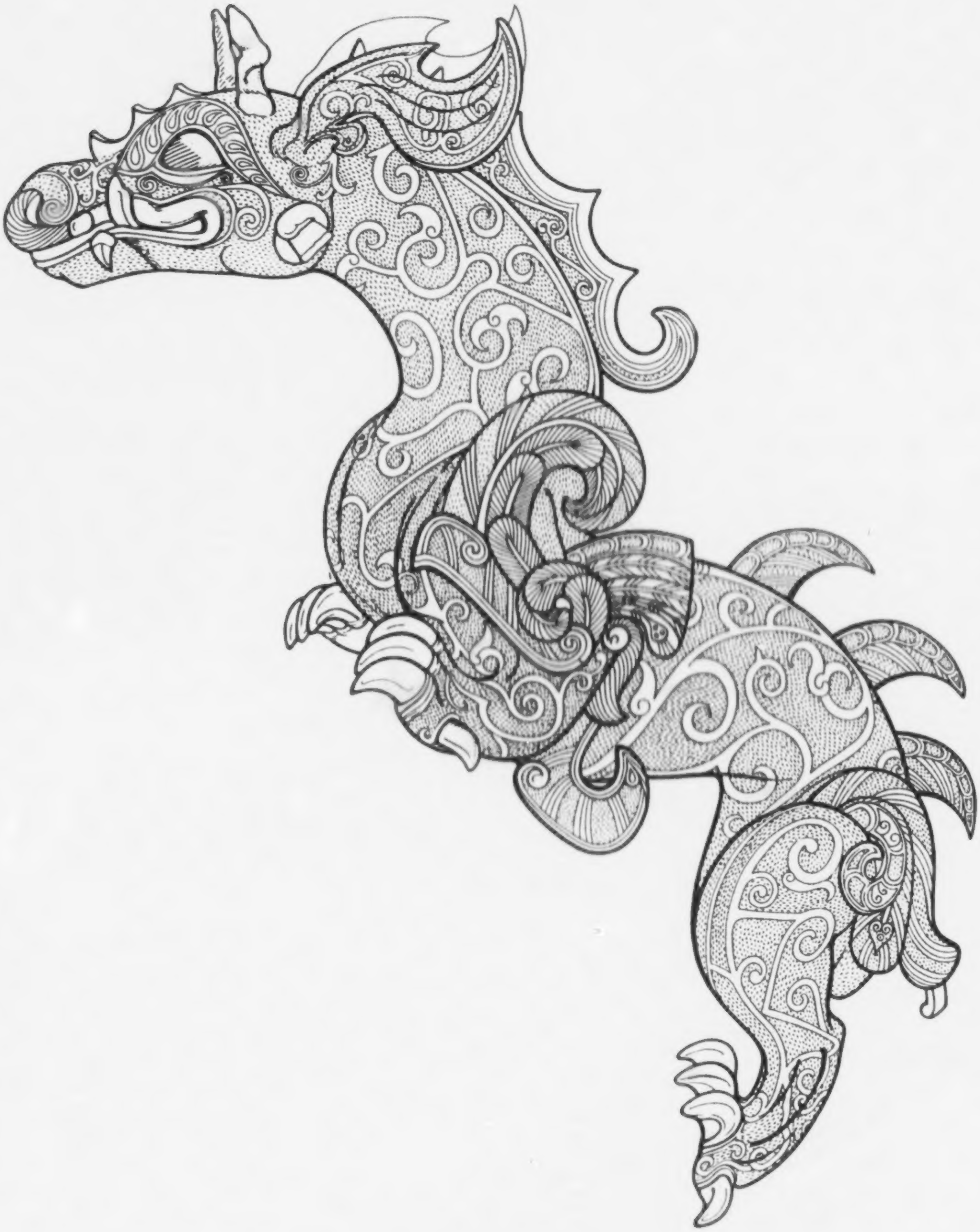
- mural paper
- masking tape
- newspaper
- black marker
- triangular sponges
- red tempera paint
- glue

COLLAGE MATERIALS

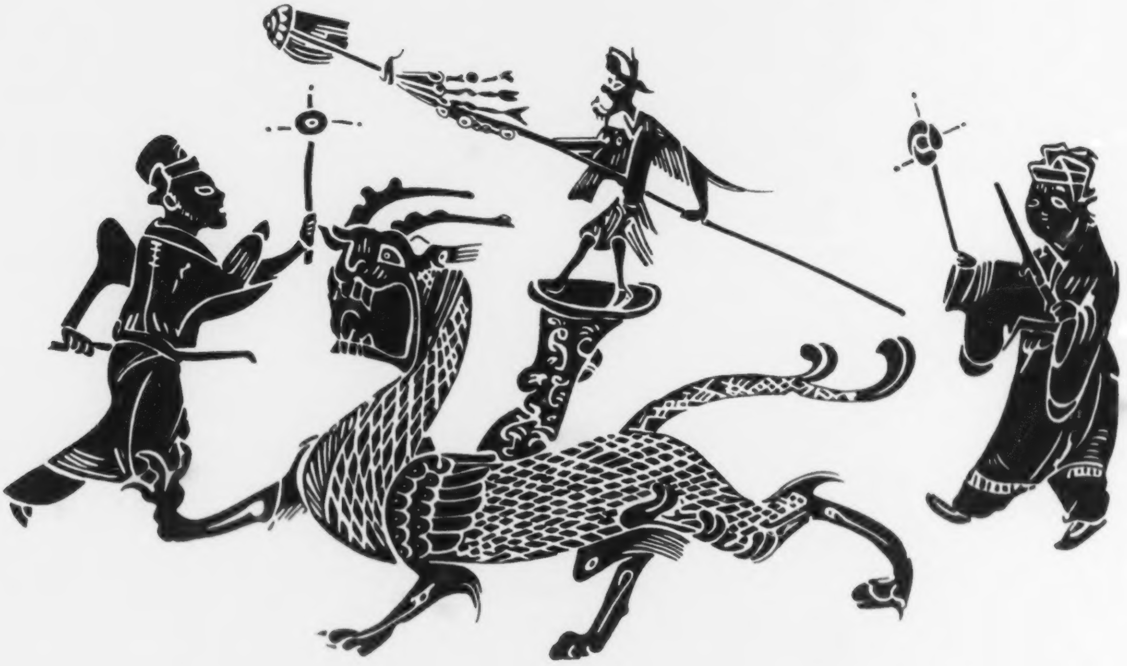
red paper curls, triangular pieces of vinyl cloth,
bottle caps, plastic lids, sequins, aluminum foil scraps

DIRECTIONS

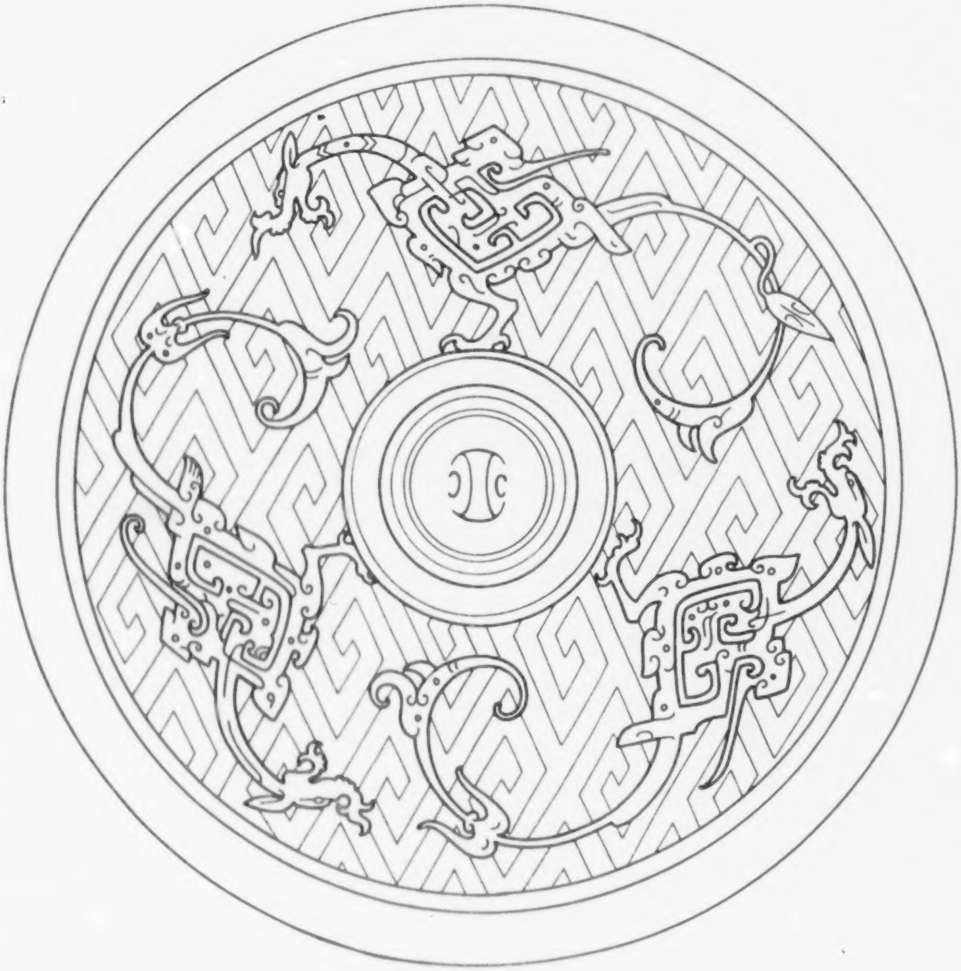
1. Tape the mural paper to the wall at a child's height. Lay sheets of newspaper on the floor under the paper.
2. Draw the outline of a large dragon on the mural paper.
3. Print triangles on the dragon's body with the sponges.
4. When the paint is dry, glue red paper curls near the mouth to resemble flames, triangular vinyl scraps on the back for scales, and bottle caps or lids as eyes. Personalize the dragon with other collage materials.



A famous dragon of bronze, from the Zhou dynasty, c. 5th century B.C.

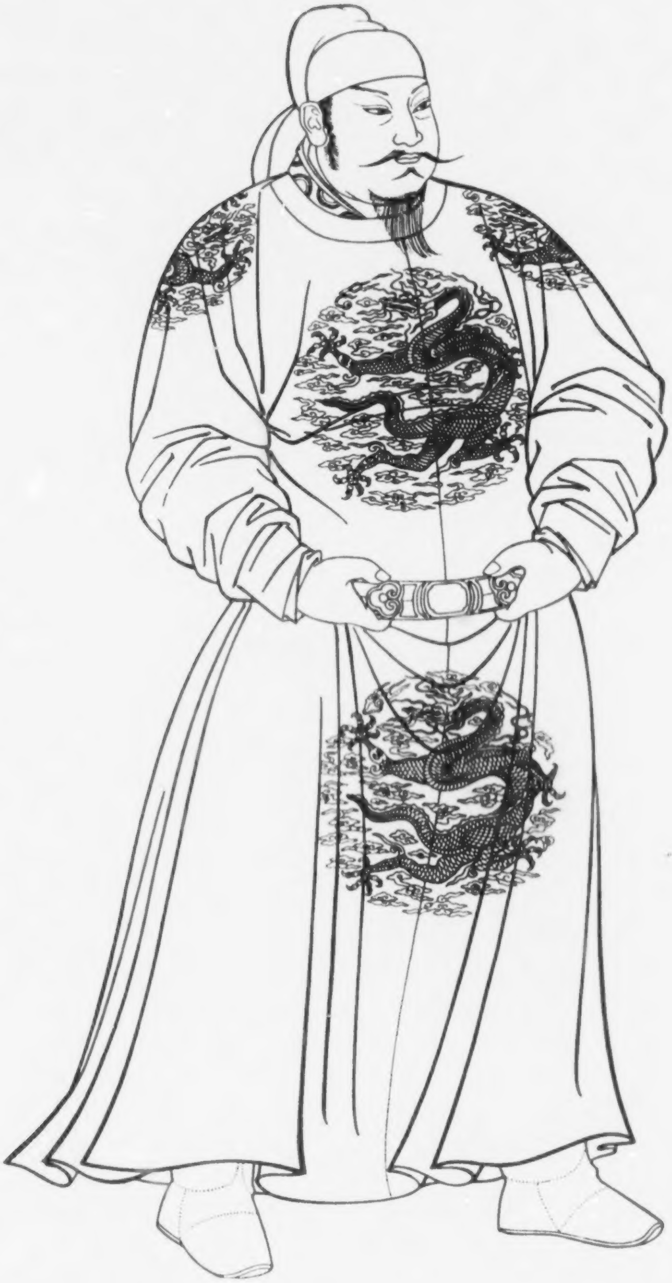


Rubbing of stone relief, Inan, Shandong, Eastern Han Dynasty, 220 A.D.



FLYING DRAGONS

From a bronze mirror back from the Late Zhou Dynasty, 3rd century B.C.



The Emperor Tai Zong
626 - 649

Since 206 B.C. the 5-clawed dragon has been the emblem of imperial power.

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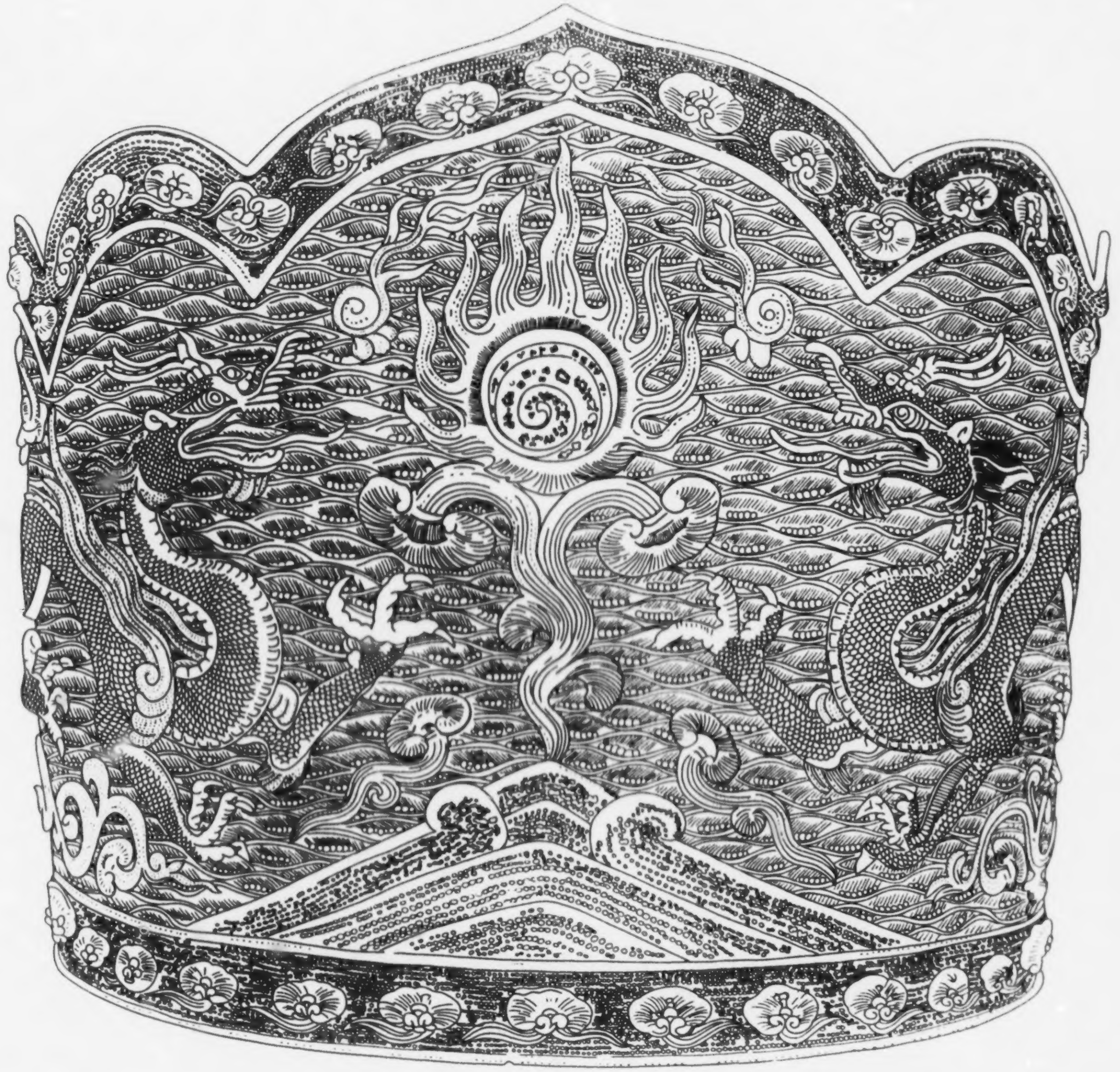
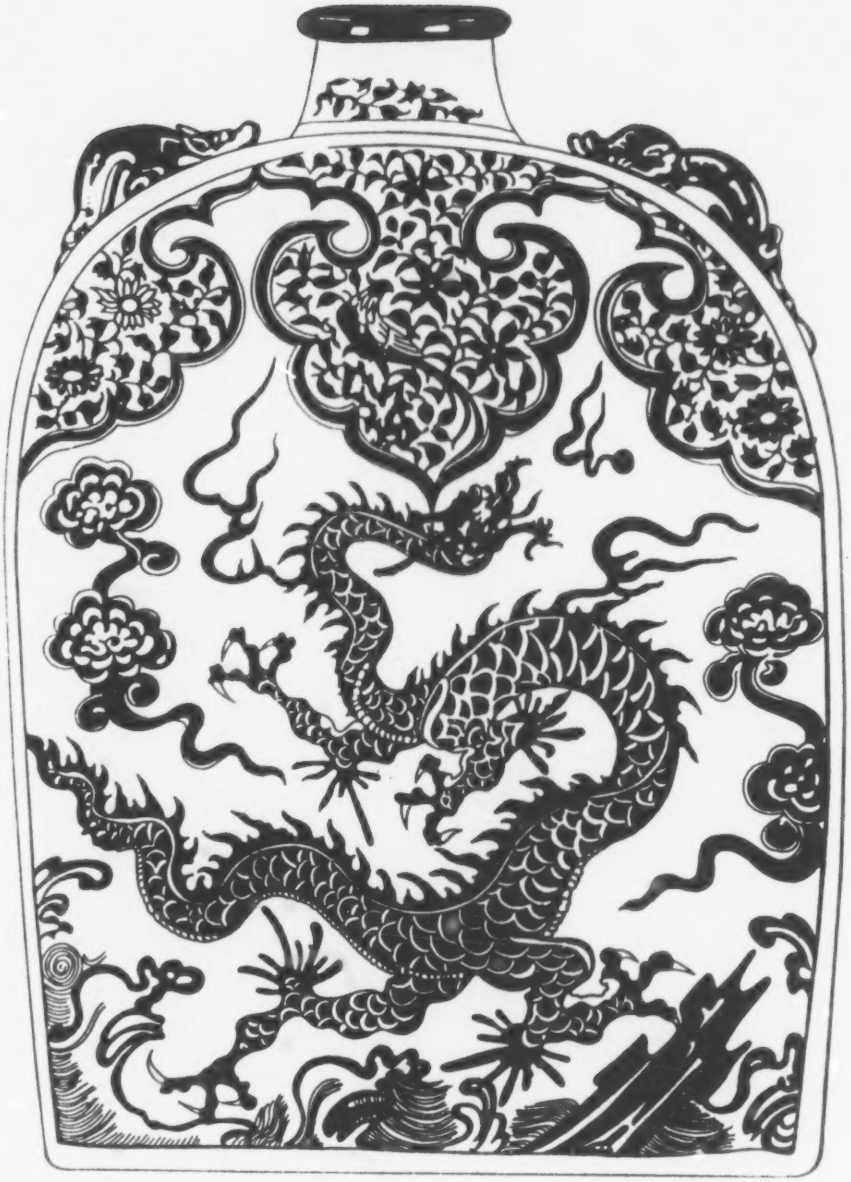
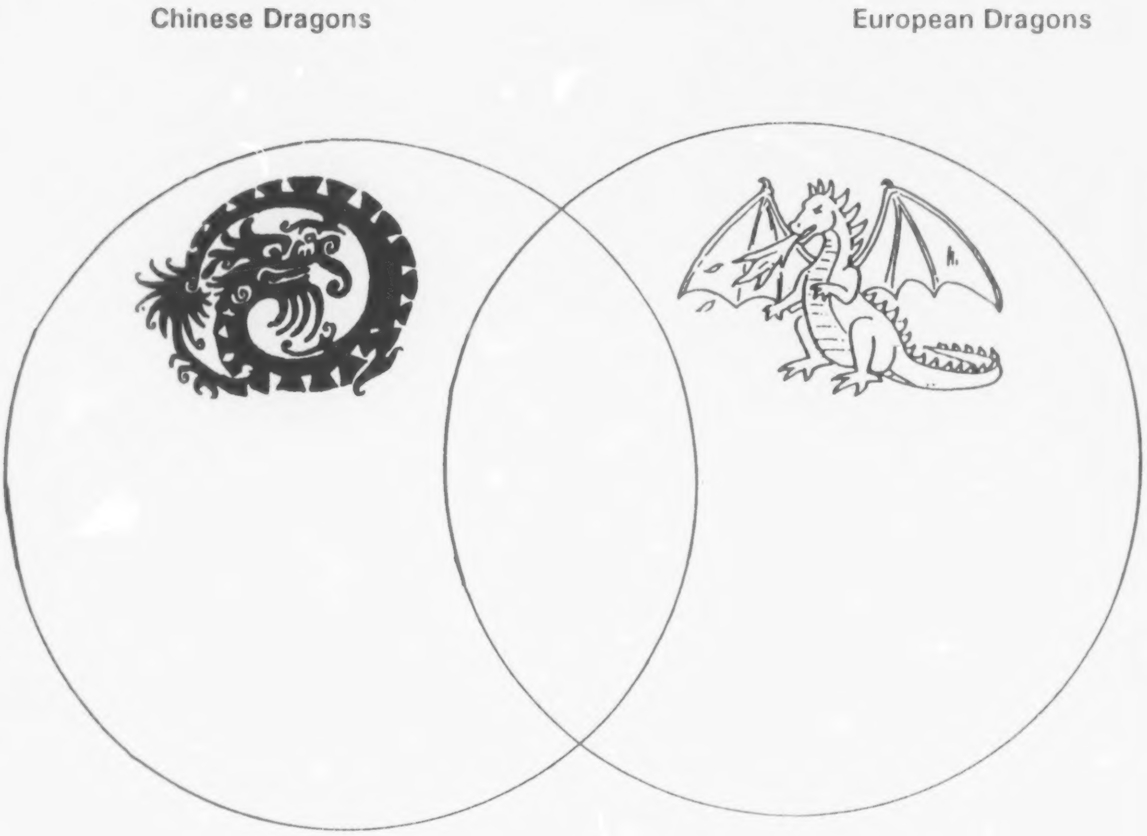


Silver royal crown decorated with dragon design, Liao Dynasty, late 10th to early 11th century.



Porcelain flask decorated with dragon design in underglaze blue, Yüan to Ming Dynasty, 14th century.

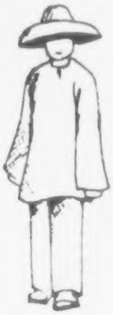
A 2-WAY VENN DIAGRAM


Chinese Dragons
European Dragons

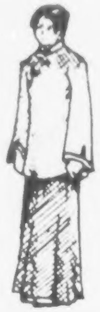
CHINESE CLOTHING

The clothing in the story of the River Dragon is traditional Chinese. Clothes are made of silk or cotton. The men usually wear plain costumes with fewer patterns, while women wear colorful costumes with more intricate designs. If you visited China today, you would not see people dressed like this except for special occasions.

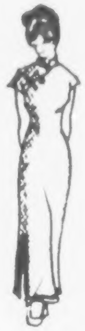
- How would you describe the clothing you see in the story?
- How is it different from your own clothing?
- Which would you like to wear? Why?
- Do you wear special clothing for special occasions? What?



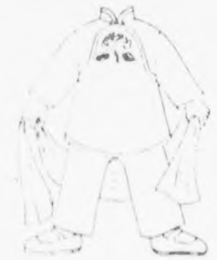
Work clothes of a Chinese laborer in the 19th century.



Outfit for a Chinatown merchant of early days.



Cheong sam, which means long dress.

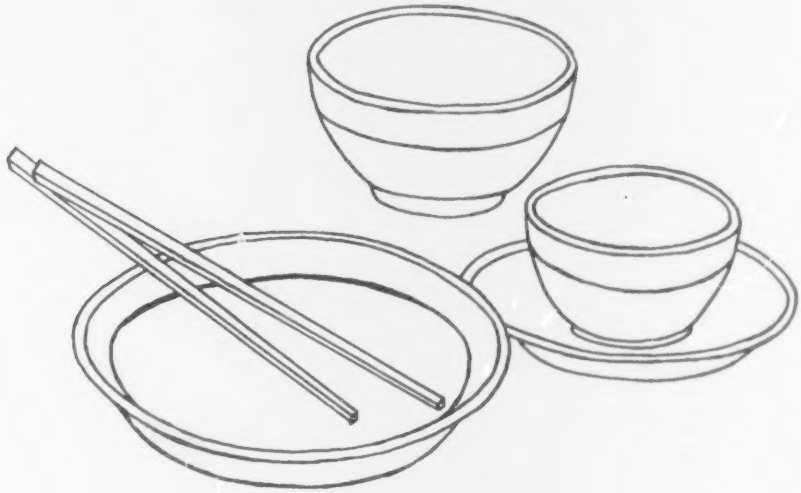


Shan & Trousers
These are worn by both male and female Chinese Ribbon dancers. The ***shan***, or jacket, is often silk.

- Nowadays, Chinese Americans dress as other Americans dress. Make a list of countries that influence today's American fashions. See if there are any clothes in your closets with Chinese influence.

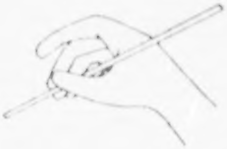
A CHINESE TABLE

Invite children to take a closer look at the story's picture which illustrates all the guests seated around a table full of delicious food. Point out that the classic Chinese table is round to allow guests to be at equal distances from the food. The respected person (usually the eldest) is seated at the place of honor, which is usually at the inner side of the room facing the entrance, while the seats on the serving side are for the host and hostess. The guest of honor is always seated facing the host. Each place setting has a plate, a rice bowl, a soup bowl, a pair of chopsticks, and a tiny saucer.

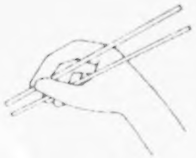


EATING WITH CHOPSTICKS

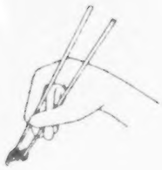
Chinese people use chopsticks instead of forks. Study the pictures below to learn the art of Kuai-zi:



1. Place one chopstick in hand, holding one stick between your thumb and index finger. This chopstick will stay still, don't let it move!



2. Use your thumb, index finger and two middle fingers to hold the other chopstick. This chopstick will move to pick up the food.



3. Keep the bottom points of the chopsticks even. Move the second chopstick to "pinch" the food against the first chopstick. Pick up the food and eat it!

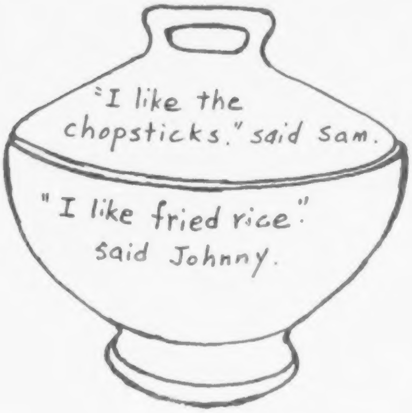
Have fun!

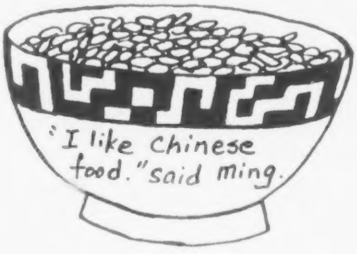
- Offer a selection of Japanese, Chinese and Korean chopsticks. Japanese chopsticks are more tapered at the end than the Chinese, and the Korean ones are often stainless steel as opposed to bamboo. Chopsticks also come in a variety of sizes - long for cooking, short for eating, and very short for children. They can be plain or decorated, and made of plastic, metal or wood.

THE CHINESE ART OF COOKING

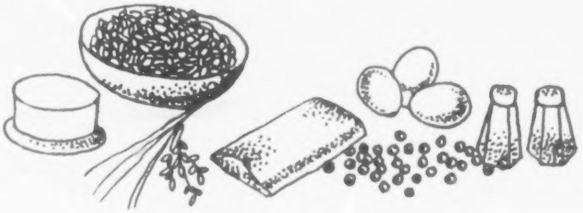
The great Chinese Philosopher Lao Tzu once said: "Governing a great nation is much like cooking a small fish." What he meant is that in governing a country, just the right "seasonings" and adjustments need to be made for successful results. This metaphor clearly points out the important position that food occupies in the Chinese mind.

- **Cooking:** ***Fan***. Sound interesting? This is the Chinese word for cooked rice. Children in China eat rice everyday. Follow the recipes on how to make Cantonese fried rice. Serve the cooked rice and some tea in small cups. For added fun, and a true Chinese experience, teach students how to use chopsticks, called ***kuai-zi***, while the rice is cooking. (Most Chinese restaurants will give teachers chopsticks free!) After the tasting experience, write down comments on what it was like using chopsticks, as well as how the food tasted, on a large piece of butcher paper shaped like a rice bowl. Display near the Yummy Yams bowl, if that activity has been done, too!


"I like the chopsticks." said Sam.
"I like fried rice." said Johnny.


"I like Chinese food." said Ming.

- Cantonese-style Fried Rice.



INGREDIENTS

- 2 cups rice
- 4 tbsp butter or oil
- a half-pound of lean pork
- cooked peas
- 3 eggs
- salt and pepper

Cook white or brown rice. Cut the pork into small cubes and cook well in light oil. Beat eggs for an omelet, cook and cut it in strips. Lightly saute the rice in an oiled pan, stirring often. Lay rice, then peas, pork and eggs strips on a plate. Salt, pepper and dot with butter.

THE CHINESE MENU

A formal Chinese dinner for 10 to 12 people begins with four cold dishes or appetizers, followed by four quick sauteed dishes, and then four main courses. Sometimes they serve six main dishes. Soup is always served later, and dessert last.

Invite children to notice some of the delicious dishes set before the guests at the banquet. Besides the swallow dish, the guests might be eating hot and sour soup, bao zi (steamed stuffed bun), and shrimp with vegetables.

- What is your favorite dinner dish?
- How does this scene look different from what your home might look like at dinnertime? How is it the same?
- Which of these Chinese dishes would you like to try?
- Do you have a special place where you always sit at your dinner table?

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MAKING BAO ZI

The goldsmith boasted that his wife was an excellent cook. Kal-Li's mother had many special recipes for swallow dishes. Invite students to notice the round, white bread on the table in the banquet illustration. This Chinese steamed, stuffed dumpling is called ***bao zi***. It is a popular Chinese favorite. Make ***bao zi*** with your students.

INGREDIENTS

- bread dough
- 1 lb (450 g) Chinese cabbage
- 1 lb (450 g) ground pork or beef
- green onions
- gingerroot
- 2 tsp (30 ml) sesame oil
- 2 tsp (30 ml) soy sauce
- 1/2 tsp (2.5 ml) salt

DIRECTIONS

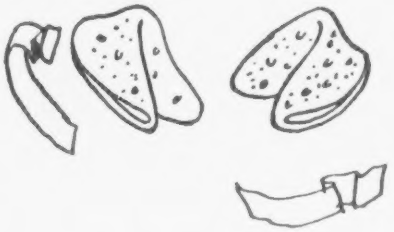
Chop the cabbage into pieces and squeeze out the juice. Chop a few green onions and a small amount of gingerroot. Combine the ground pork or beef, chopped cabbage, green onions, gingerroot, sesame oil, soy sauce, and salt in a bowl. Then cut the bread dough into small pieces. Roll each piece into a flat circle. Place a spoonful of the mixture in the center of each dough circle. Bring the edges to the center and pinch tightly to seal. Steam the dumplings for 10 to 15 minutes in a steamer. (Or, they can be fried for 7 to 10 minutes.) Enjoy! Invite students to share some of their family's special recipes with the class.

MAKING FORTUNE COOKIES

Fortune cookies are often the last course of a Chinese-American meal. They are served as a dessert. Make personalized fortune cookies with your students.

FORTUNE COOKIES RECIPE

INGREDIENTS



- 1 lb (450 g) wheat flour
- 3 tsp (15 ml) sesame oil
- 3 tsp (15 ml) sugar
- water
- small slips of paper

DIRECTIONS

Combine the flour, sugar, and sesame oil. Gradually add water until the flour mixture is a doughy consistency and easy to handle. Separate the dough into small pieces. Roll the pieces into flat circles together and pinch the edges closed. Leave small openings to insert the fortunes after baking. Fold the center of the half-circle shapes in half slightly to make a traditional fortune cookie shape. Bake the cookies at 350°F (180°C) for 5 to 10 minutes.

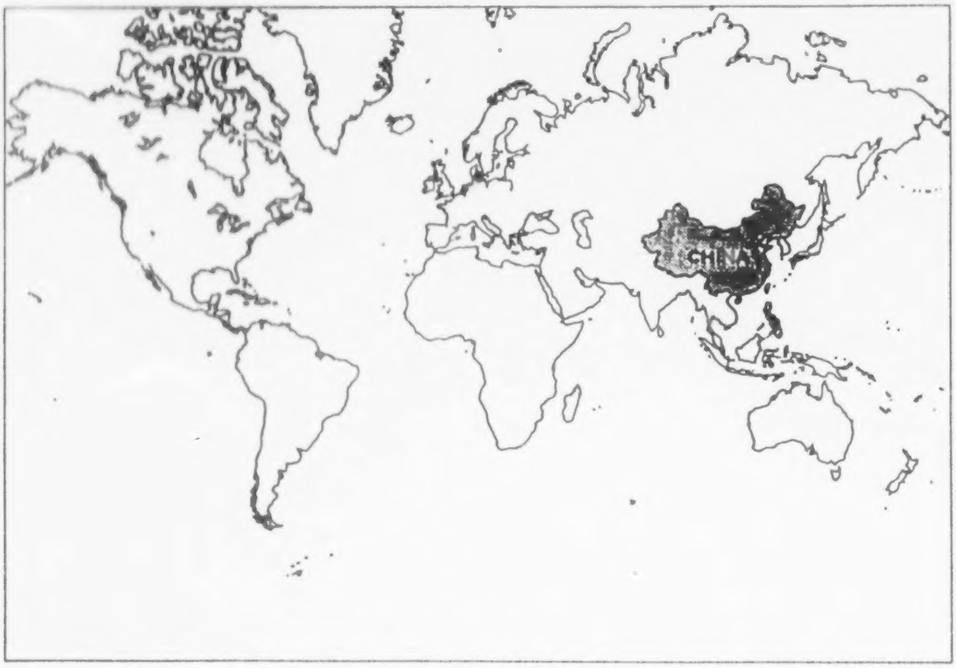
Make fortune cookies and write original fortunes to put in cookies.

Here are a few suggestions:

Opportunity knocks only once. Be alert.
What's done cannot be undone.
Don't let your time disappear without a gain.
Better to be left alone than in bad company.
Every man is the architect of his own fortune.
Putting things off is robbing yourself of chance.

COUNT YOUR WAY THROUGH CHINA

Written by Jim Haskins and illustrated by Dennis Hockerman. Minneapolis, Minnesota: Carolrhoda Books, 1987



Synopsis

According to a Chinese myth, 4 animals helped a being named P'an Ku create the universe, which took 18,000 years. This ancient story joins nine other explanations of varying aspects of Chinese life - from the 5 tones of the Chinese musical scale to the 10 major dynasties in Chinese history.

Background

Jim Haskin's Count Your Way Through China is one of the Carolrhoda Count Your Way Books, which are as entertaining as they are informative. Using the numbers one through ten, noted author Jim Haskins introduces young readers to the country of China and the Chinese culture, covering such topics as history, geography, religion, and traditions. Full-color illustrations on each page by Dennis Hockerman give children an opportunity to get to know China and the Chinese people more vividly and further develop the concepts presented.

Curriculum Connections

Learn to count from 1 to 10 in Chinese. The following Pronunciation Guide will help you to say the numbers. Pay special attention to the tones of each character. Invite a native Chinese speaker to your class if help is needed.

Pronunciation Guide

	Chinese Numbers	Mandarin		Cantonese
1	一	(yee)	yi	yat
2	二	(uhr)	er	yi
3	三	(sahn)	san	saam
4	四	(suh)	si	sei
5	五	(woo)	wu	ng
6	六	(lyo)	liu	luk
7	七	(chee)	qi	chat
8	八	(bah)	ba	baat
9	九	(jo)	qiu	gau
10	十	(shur)	shi	sap

- Make a time line to show how relatively young the United States is in comparison to China. Use the Chinese History Table as a guide.

CHINESE HISTORY TABLE

Dynasty	Divisions	Dates	Capital	Major Events
Xia		2205 - 1766 B.C.		Documentary evidence is lacking for China's dynasty.
Shang (or Yin)		1766 - 1122 B.C.	Anyang	Although the king ruled by "mandate of Heaven", he had limited control over China's feudal states.
Zhou	Western Zhou Eastern Zhou (Chun Qiu) (Zhan Guo)	1122 - 771 B.C. 771 - 225 B.C. 722 - 481 B.C. 403 - 221 B.C.	(Sian) (Luoyang)	This is known as the Classical Age. About 900 B.C., the feudal empire of Zhou began to show symptoms of decay. Princes of the individual states defied the emperor. In 771 B.C. the Zhous moved their capital from Hao to Loyi and the dynasty became know as Eastern Zhou. Feudal princes became a law unto themselves. The first 300 years of Eastern Zhou is called the Period of Spring and Autumn Annals (Chun Qiu) and the last 200 years is known as the Period of Warring States (Zhan Guo). The period from the 6th through the 3rd century brought the flowering of Chinese philosophy, including Confucianism and Taoism.
Qin		221 - 206 B.C.	Xian Yang (West of Sian)	Qin Shi Huang unified China for the first time. Feudalism was abolished and the country divided into 36 centrally administered prefectures. Uniformity was established in the written language, money, weights and measures. The Great Wall started as a defense against the barbarians of the north. However, the old books were burned and thought control imposed under the philosophy of Legalism. Qin lasted only 15 years.

Dynasty	Divisions	Dates	Capital	Major Events
Han	Western Han	206 B.C. - 8 A.D.	Changan (Sian)	This is known as the Imperial Age. The empire was extended and the government was centralized. Service examinations were introduced. Confucianism was supported by the state. The calendar was reformed and education flourished. Trade routes were opened to the West and Chinese goods and culture spread across Asia.
	Xin	8 - 25	Changan	Wang Mang the usurper made himself "Emperor of Hsin". He nationalized land and redistributed large holdings.
	Eastern Han	25 - 221	Luoyang	Liu Xiu restored the Han empire and extended China's authority to Central Asia. Paper was invented by Cai Lun (105 A.D.). Buddhism was introduced from India (66-170) and Taoism was established as a religion (130-199).
Three Kingdoms	Wei Shu Wu	221 - 261 222 - 263 222 - 280	Luoyang Chengdu Nanjing	Corruption and social chaos led to the break-up of the Han dynasty and the emergence of Wei in the north, Shu in the west and Wu in the east. Buddhism gained ground during this time of schism.
Jin	Western Jin Eastern Jin	265 - 316 317 - 420	Luoyang Nanjing	The Si-ma family reunified the country and founded the jin. At first, there was a 20-year period of near anarchy with a struggle for power and the invasion of northern barbarians. Buddhism and Taoism grew in popularity.

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Dynasty	Divisions	Dates	Capital	Major Events
Southern and Northern Dynasties	SOUTH			This was again a period of turmoil and frequent wars. There were large migrations from north to south as a result of barbarian pressure. The barbarian tribes gradually absorbed Chinese culture. Buddhism flourished.
	Song	420 - 479	Nanjing	
	Qi	479 - 502	Nanjing	
	Liang	502 - 557	Nanjing	
	Chen	557 - 589	Nanjing	
	NORTH			
	N. Wei	386 - 534	Pingcheng (Luoyang)	
	E. Wei	534 - 550	Yeh (Henan)	
	W. Wei	535 - 557	Changan	
	N. Qi	550 - 557	Yeh (Henan)	
	N. Zhou	557 - 581	Changan	
Sui		589 - 618	Changan Luoyang Yangzhou	Yang Qi reunified the empire. Criminal law was codified. The Great Wall was repaired and extended, and the Grand Canal was constructed. Like Qin, the Sui dynasty was shortlived because of totalitarian tendencies.
Tang		618 - 907	Changan Luoyang	Chinese culture made great advances during this period. Great poets included Wang Wei (699- 759), Li Po (8th c.), Tu Fu (8th c.) and Bai Ju-yi (9th c.). Block printing was invented. Provinces were governed by appointees of the emperor, and the civil service examination system was improved. Taoism, Confucianism and Buddhism were honored and Islam and Nestorianism introduced. Freedom of thought and study attracted many foreign students to China.
Wu Dai "Five Dynasties" and "Ten Kingdoms"	Late Liang	907 - 923	Kaifeng	This was another time of political anarchy. Military leaders set themselves up as kings. Many Buddhist monasteries were demolished.
	Late Tang	923 - 936	Luoyang	
	Late Jin	936 - 947	Kaifeng	
	Late Han	947 - 950	Kaifeng	
	Late Zhou	959 - 960	Kaifeng	

Dynasty	Divisions	Dates	Capital	Major Events
Song	North Song South Song	960 - 1127 1127 - 1280	Kaifeng Hangzhou	Zhao Kuang-yin reunified the empire and founded the Song dynasty. But the Tartars took Kaifeng and the Sung court moved south while the invaders established the Kin dynasty in the north.. Song was an era of neo-Confucianism, with such outstanding philosophers as Cheng I, Cheng Hao, Chang Tsai and Zhu Xi. Printing from movable type was introduced. Trade with the west increased.
Yuan		1280 - 1368	Beijing	The Mongol ruler Kublai Khan, grandson of Genghis Khan, declared himself emperor of China and the Mongols proceeded to put together the most extensive empire in world history. Men of all races were to be found in the government. Marco Polo called European attention to China. Drama and fiction made progress.
Ming		1368 - 1644	Nanjing Beijing	Mongol rulers couldn't digest what they had conquered and were oppressive. Zhu Yuan-Zhang restored the empire to Chinese rule and named his dynasty Ming (bright). The political system was modeled after that of Han-Tang times with 13 provinces. Cultural progress continued. Zheng He's seven seafaring expeditions (1405-1431) took Chinese explorers throughout Southeast Asia and as far as Africa. Near the end of the period, Jesuit missionaries reintroduced Chistianity to China and brought too, the science of the European Renaissance.

Dynasty	Divisions	Dates	Capital	Major Events
Qing		1644 - 1911	Beijing	The Manchus moved south under the pretext of helping the Ming dynasty exterminate bandit hordes, occupied Peking and took over the government. Many Chinese fled to Southeast Asia, just as they had done previously to escape the Mongols. Cheng Cheng-kung (Koxinga) took his forces to Taiwan in an attempt to continue resistance against the invaders. In the process he drove the Dutch from the island and assured its future as a part of China. Once their rule was secure, the Manchus assimilated China's superior culture. Arts and literature were encouraged. For a while, scientific progress was made. The disastrous Opium Wars (1839-1842) with England began the downfall of the Manchus. China was placed at the mercy of Western imperialism. The Taiping Rebellion of 1851-1864 paved the way for subsequent revolutions.
Republic	Republic of China	1912 -	Nanjing	Dr. Sun Yat-sen (1866-1925 and the Kuomintang (Nationalist Party) overthrew the Manchu government in 1911 and established the Republic on January 1, 1912. In 1914 the Republic of China - headed by Chiang Kai-Shek - withdrew to Taiwan to escape communist forces that had taken over China. The communist established the People's Republic of China (PRC) on mainland Asia in 1949.
	People's Republic of China	1949	Beijing	

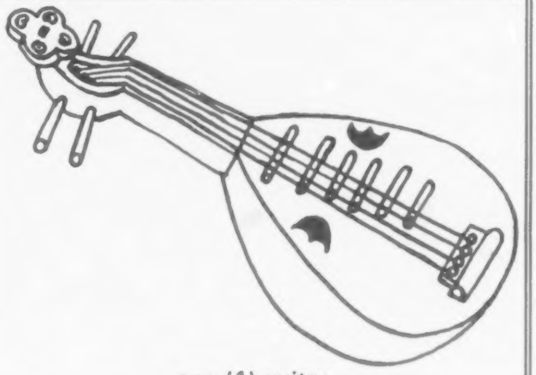
- Make a Chinese Counting Mini-Book.

MY CHINESE COUNTING MINI-BOOK

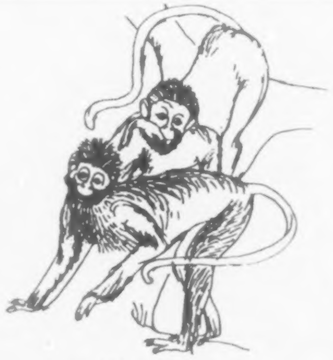
MY CHINESE COUNTING

MINI-BOOK

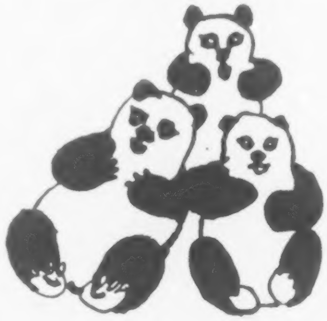
My name is:



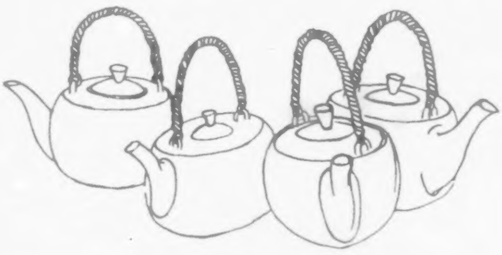
one (1) guitar



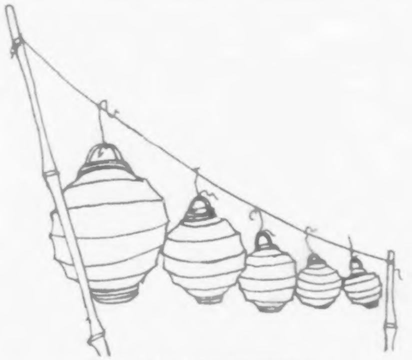
two (2) monkeys



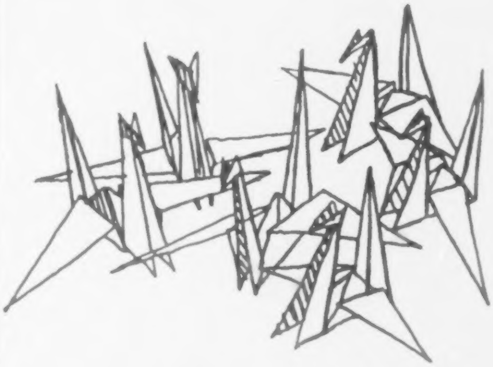
three (3) pandas



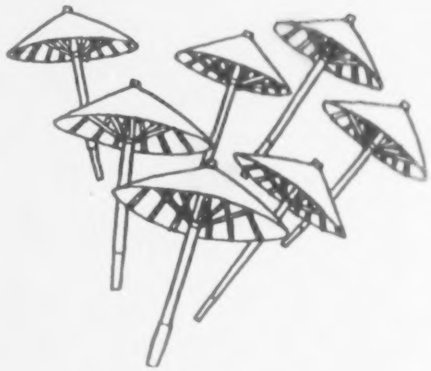
four (4) teapots



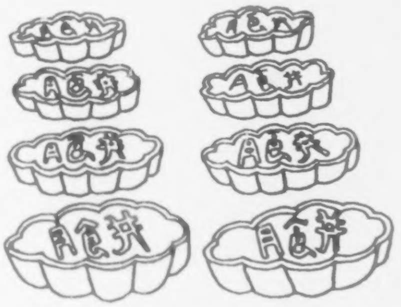
five (5) lanterns



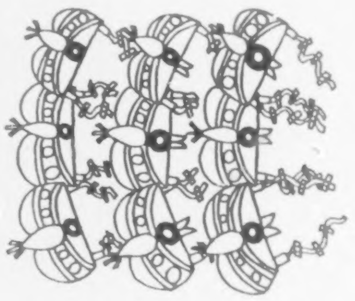
six (6) paper birds



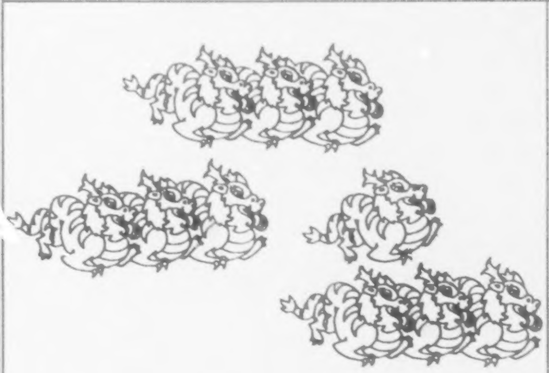
seven (7) umbrellas



eight (8) mooncakes



nine (9) kites



ten (10) dragons

THE GIANT PANDA

The world first heard about the loving panda in China about 100 years ago. It looks like a bear. Today, it is one of the most endangered animals in the world. There are probably no more than 1,000 left.

Black eyes

A Chinese legend tells why giant pandas are black and white. Long ago they were all white. One day they went to the funeral of a young girl with ashes on their arms as a sign of respect. They were very sad. They wiped their eyes to dry the tears, hugged themselves in sorrow, and covered their ears with the paws to block out the sound of crying. And wherever they touched themselves the ashes stained their fur black.

The giant panda was not known to the western world until 1869. It was first discovered by a French missionary naturalist named Abbe Armand Doud. In 1936, Ruth Harkness, an American brought a baby panda from China to the United States. In 1941, the Chinese government gave two giant pandas to the American people to thank the United States for their help. The Chinese delegate said, "...We hope that their cute antics will bring as much joy to the American children as American friendship has brought to our Chinese people." In 1972, President Nixon was the first American president to visit the People's Republic of China. To mark this event, two giant pandas were given to the National Zoo in Washington, D.C. They were named Ling Ling (meaning the tinkling of small bells) and Xing-Xing (meaning a bright star).

®

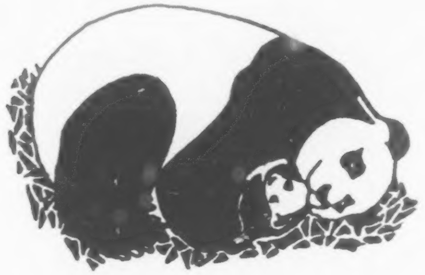
WWF

Today, the giant panda is the symbol of the World Wildlife Fund's effort to save all the endangered animals.

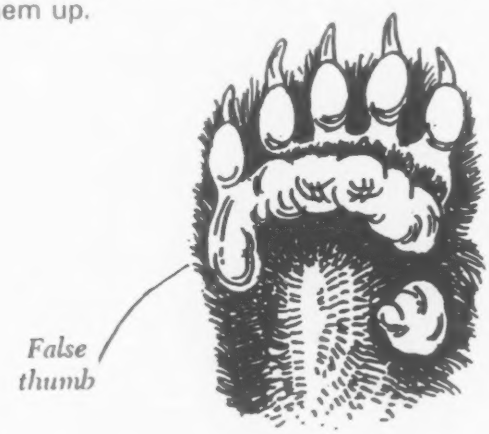
Some Facts About Giant Pandas

- Baby pandas weigh about 3 ½ ounces and are only 6 inches long - barely as large as a golden hamster. They have black ears, eyes, shoulders, and legs with a white face and body.

- The female panda is a conscientious mother and devotes herself to her offspring. For the first few weeks of its life she holds the cub in her arms, never letting it go for an instant. It is completely protected from the wind and weather as well as enemies. She holds it tenderly against her breast while it nurses and she constantly licks it to keep it clean. The habit of carrying her young in her arms may be one of the reasons why a female panda normally raises only one cub; she would have difficulty in holding two.



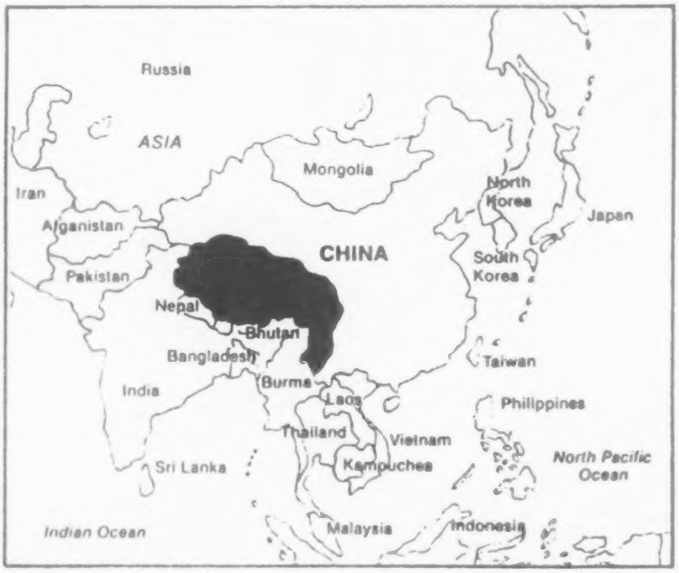
- One of the special things about the giant panda is its unusual **panda's thumb** - sometimes called its false thumb. This is not actually a thumb, like a human thumb. It's a part of the wristbone that sticks out to the side,like an extra, padded finger. The giant panda uses it like a thumb to grasp things and pick them up.



Where Do Giant Pandas Live?

In the wild, giant pandas can be found only in China. They live in the high mountains near the province of Sichuan.

This map shows the area where pandas live.


Russia
ASIA
Iran
Afganistan
Pakistan
Mongolia
North Korea
Japan
CHINA
South Korea
Nepal
Bhutan
Bangladesh
Taiwan
India
Burma
Laos
Philippines
Thailand
Vietnam
Kampuchea
Sri Lanka
North Pacific Ocean
Indian Ocean
Malaysia
Indonesia

Pandas live in the mountains, in the lush bamboo forests of China. Adult pandas can weigh about 300 pounds or more and eat about 45 pounds of bamboo a day to keep up their strength. Eating takes them about 14 hours. Since bamboo is becoming scarce in the forests, the pandas have less food to eat each year.

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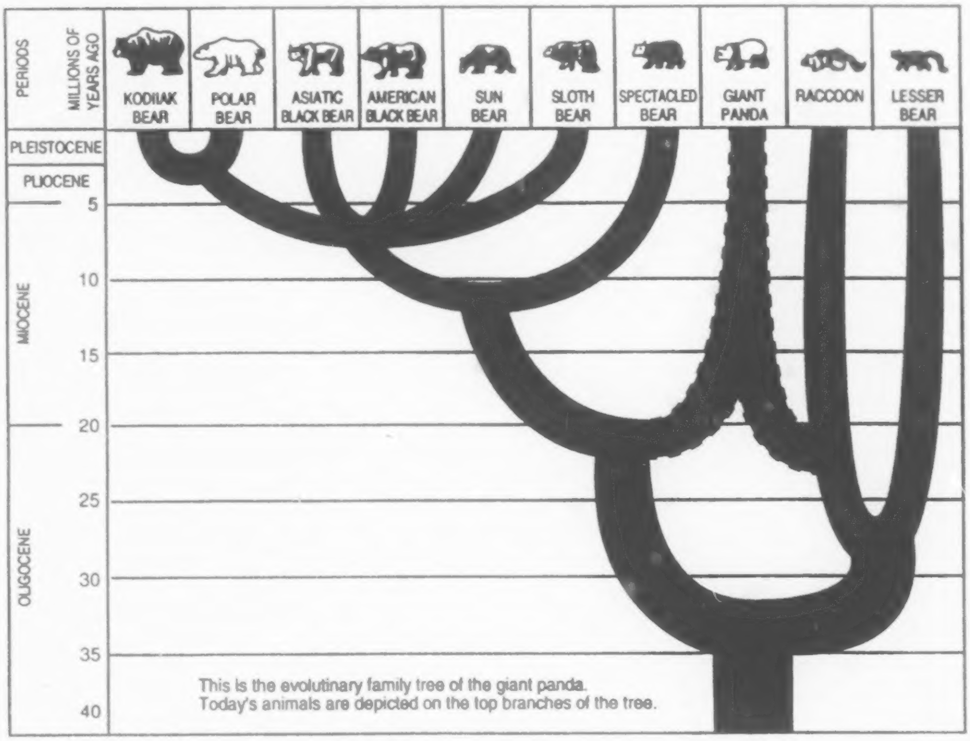
THE FAMILY TREE OF THE GIANT PANDA

The Chinese name for the giant panda is *daxiong mao* (dah-shung mah-oo) - "great bear-cat."

The scientific name of the giant panda is *Ailuropoda melanoleuca* (a-law-ruh-po-duh mel-an-o loo-kuh), which means "black and white cat-foot." The scientific name of the red panda is Ailurus fulgens (A-law-rus full-jens), meaning "fire-colored cat." The giant panda is certainly not a cat. But is it a kind of bear?

Some scientists say yes. It looks like a bear. It walks like a bear. Its cubs, when born, are very tiny - like a bear's. Its blood, when analyzed, is like a bear's.

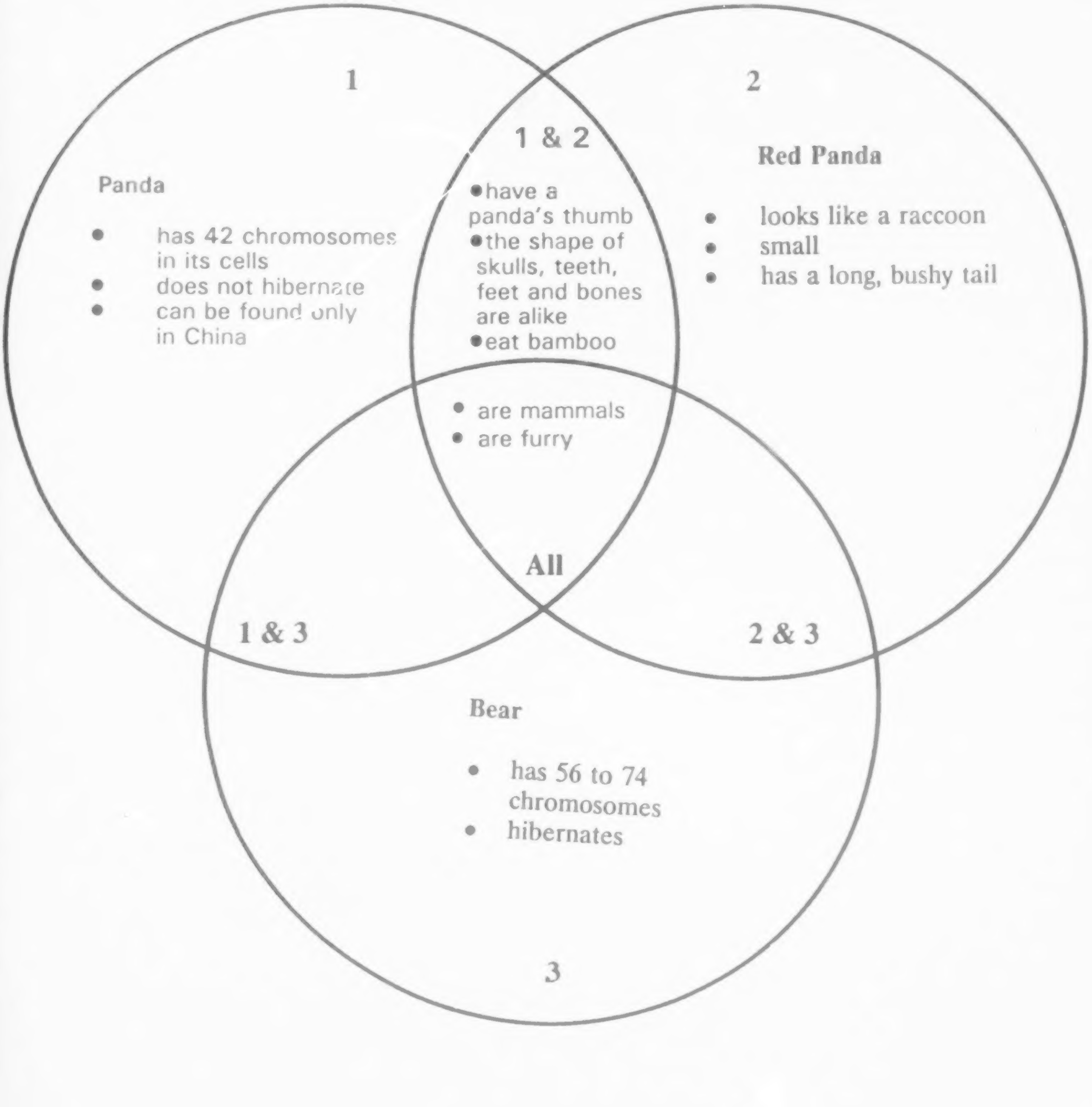
Other scientists say no. They believe the giant panda is part of the raccoon family.


PERIODS
MILLIONS OF YEARS AGO
KODIAK BEAR
POLAR BEAR
ASIATIC BLACK BEAR
AMERICAN BLACK BEAR
SUN BEAR
SLOTH BEAR
SPECTACLED BEAR
GIANT PANDA
RACCOON
LESSER BEAR
PLEISTOCENE
PLIOCENE
MIOCENE
OLIGOCENE
5
10
15
20
25
30
35
40

This is the evolutinary family tree of the giant panda.
Today's animals are depicted on the top branches of the tree.

3-WAY VENN DIAGRAM

Draw three large, overlapping circles on butcher paper. Put the similarities between red panda and giant panda in the overlapping area and the unique aspects of each animal in its own space.


1
Panda
• has 42 chromosomes in its cells
• does not hibernate
• can be found only in China
1 & 2
• have a panda's thumb
• the shape of skulls, teeth, feet and bones are alike
• eat bamboo
2
Red Panda
• looks like a raccoon
• small
• has a long, bushy tail
• are mammals
• are furry
All
1 & 3
2 & 3
Bear
• has 56 to 74 chromosomes
• hibernates
3

K-W-L CHART

Topic: Panda Bear

What I **KNOW**	What I **WANT** to find out	What I **LEARNED**	What I still need to know

DIRECTIONS

Fill out a K-W-L chart with a partner or a group.

1. Write what you already **KNOW** about the panda bear
2. Write what you **WANT** to know about the panda bear
   - Jot down information you learn and new questions you think of.
3. Write what you have **LEARNED** about the topic.
4. Check your **WANT** list to see what questions were answered.
   - List questions you still want answered.

Review your **KNOW** list.

- Is any of that information incorrect?
- Is there information you would still like to know about?

Acrostic

After the completion of the research stage of the project, model the process of writing an acrostic poem using what the children (as a class) have learned about pandas. Introduce the format for an acrostic, a simple poem using each letter of the word that is its subject as the beginning letter of the first word in each line. As shown in the acrostic created by the class, the form is usually unrhymed and uses complete sentences, phrases or words.

Pandas

P andas are found in only a few remote regions in the southwestern part of China.

A re tubby, round-faced animals.

N ormally they feed exclusively on bamboo.

D uring each day pandas eat bamboo for about 14 hours.

A re close to five (5) feet tall when standing up.

S pend most of their time resting.

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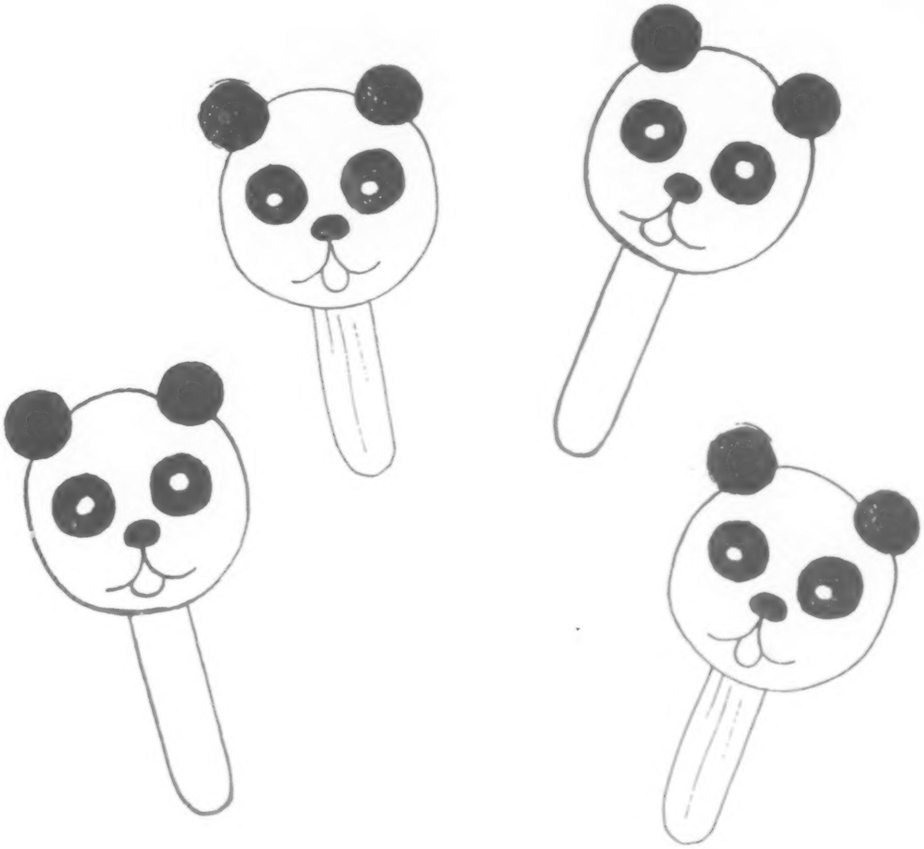
Panda Masks

Children can make panda masks or puppets to create a puppet show or role-play a story.

To make a panda mask: provide black and white construction paper, lightweight paper plates, glue, craft sticks, and masking tape (see illustration). Assist in cutting as needed. Children enjoy using plastic moving eyes when making panda puppets.



Resources: O.K. Wong (1987). Giant Pandas. Chicago, Ill.: Children Press.
J. Xugi & M. Kappeler. (1986). The Giant Panda. Boston, MA.: Houghton Mifflin.

THE SOUND OF CHINESE MUSIC

Bored with your piano lessons? Why not try the pipa or the pai-xiao (=hsiao). These are two Chinese instruments, which are part of an ancient and beautiful musical tradition.

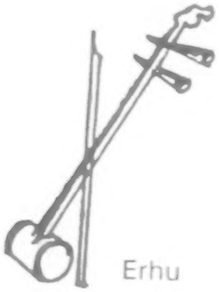
As early as 2,500 years ago, China had developed sophisticated musical theory and instruments, based largely on the orthodox ritual music prescribed by Confucius. By the Han Dynasty (206 B.C.-A.D 220), the imperial court had established a Music Bureau, in charge of collecting, editing, preserving and propagating traditional folk music. During the Tang Dynasty (618-907), the Emperor Hsuan Tsung founded the Pear Garden Academy, which cultivated skilled musicians and dancers to carry on China's already-flourishing musical tradition.

Traditional Chinese musical instruments were divided into eight categories, according to their available resources: bamboo, bronze, earthenware, gourd, hide, silk, stone, and wood. They can also be divided into four categories, according to how they are played: the blown, bowed, plucked, and struck (percussion) instruments.

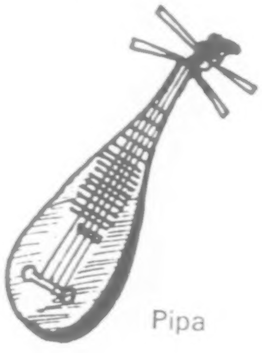
String Instruments

Chinese play string instruments. The samisen is a three-stringed instrument similar to a banjo. The pipa is a string instrument similar to a guitar. Chinese also play a type of mandolin.

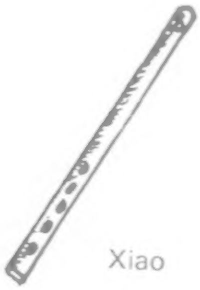
Introduce children to as many Chinese instruments as possible. Import or Asian shops may have some of them. Small bamboo flutes are inexpensive and children enjoy playing them. Encourage children to create their own music after listening to Chinese music, imitating the melodies and rhythms. Invite a musician to bring Chinese instruments to class to demonstrate. Show pictures of the instruments. Check the PBS television and radio schedules for broadcasts of Chinese music.



Erhu



Pipa

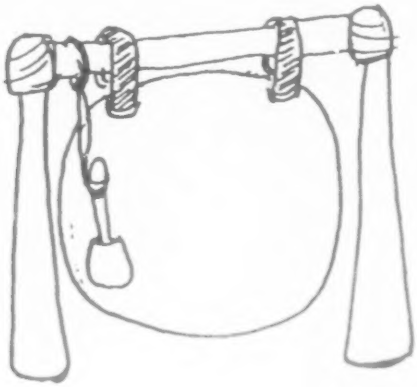


Xiao

The Chinese Gong

The Chinese gong is a unique musical instrument. Traditionally, it was used to announce special events, such as the arrival of an important visitor.

Make a gong from a large silver or metal tray. Silver (or silverplate) makes a more pleasing sound. You will need a tray that has filigree around the edge or open handles. Attach a leather loop through a hole near the edge. Pad a wooden mallet with pieces of soft cloth, covered with a larger piece of cloth or sheepskin. Children can hold and strike the gong. It can also be hung on a stand. The gong makes a wonderful sound and can be used to summon children or get their attention in the classroom.



Listening

Many Asian stores have records and tapes of popular music from China.

Play selections from the Chinese recording suggested in the Resource section. Ask children to listen for the sounds of the flutes, bells, and especially the gong. The music may inspire children to create stories and poems.

Multicultural Music Festival

Invite students, teachers and parents to display their musical talents at a school-wide music festival. In addition to playing a selection of regional music, participating musicians should be prepared to explain the history, origin and mechanics of their instrument of choice to the students. Make every effort to include music representing various periods and styles as well as instruments emanating from a variety of cultures in your festival.

CHINESE MUSICAL RECEPTION

(from a Ming painting)

Chinese Musical Reception
(from a Ming painting)

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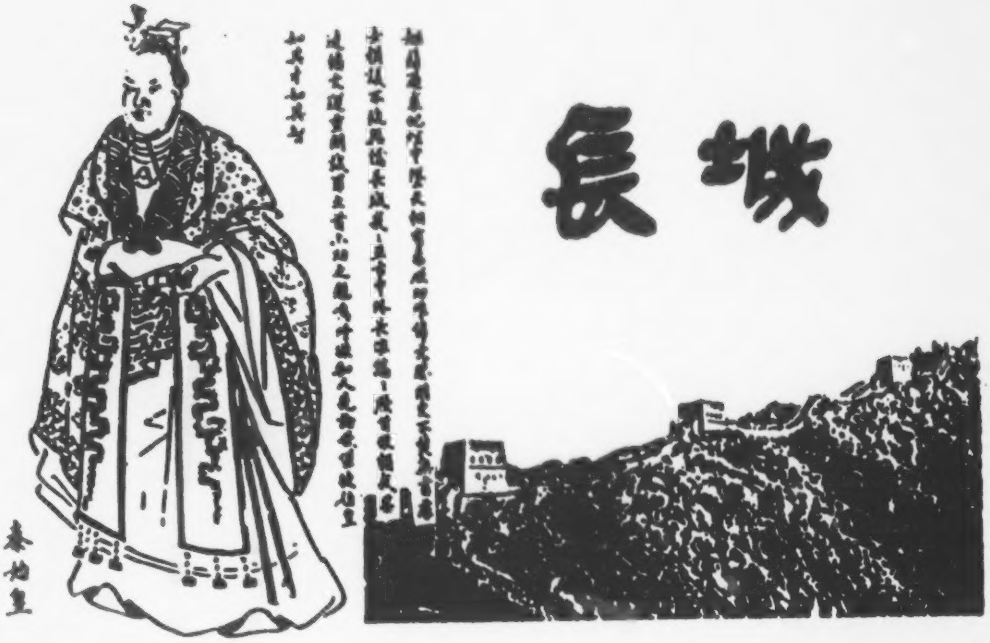
Chang Cheng - The Great Wall Of China

The Great Wall of China is the only manmade structure that can be seen by the astronauts on the moon. It was built 2,500 years ago to protect China from its invaders from the north. Although begun in the Spring and Autumn and Warring States periods (770 -221 B.C.), the Great Wall was substantially restored and expanded in the Ming Dynasty (1368-1644). Thousands of people worked on the Great Wall, making bricks and blocks of granite stone. During its construction, many workers died and were buried inside the wall. The wall is wide enough, in some places, for nine soldiers to march side by side. It is also very steep as it winds up the mountains. Every 200 to 300 yards along the wall, towers were built for observation and for shelter. As a military line of defense, the barrier had thousands of openings from which troops could fire weapons. The Great Wall begins at Shanhaiguan Pass in the East and ends at Jiayuguan Pass in the West, extending for 6,000 miles long.



The first emperor (221-206 B.C.) had the walls connected into one big wall 1,500 miles long.

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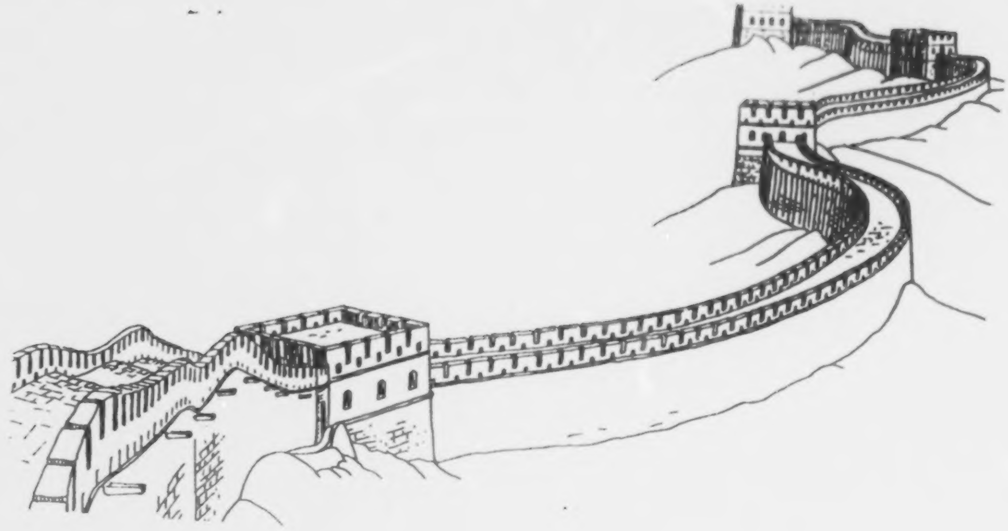
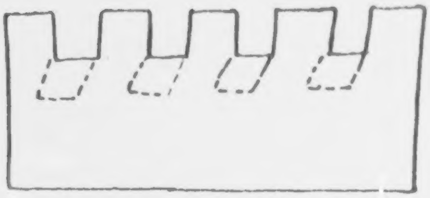
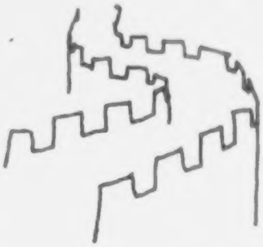


To create a Great Wall in your classroom, get four cardboard pattern boards from a fabric shop. Unfold the boards and attach two of them together, end to end, using large hard fasteners and cloth duct tape. Cut six-inch slits along the top of the two boards. fold down every other flap as illustrated. Attach one side of the Great Wall to each side of the door frame. Arrange the wall to lead through the center of the classroom. Children can pretend they are walking on the wall as they come into the room. Let children draw squares on the wall to represent the individual stones.





- Children can build a Great Wall and dig a Grand Canal in the sand outdoors. These activities help children gain an appreciation of these unique Chinese accomplishments.

TIME-IN-HISTORY DIORAMA

Choose a time in Chinese historv you would like to learn more about. It could be the building of the Great Wall in China, Trade with the West, or Intervention and Reform. Read about it! Then, follow the directions below to make a diorama of the event.

Title of Book: ______________________________

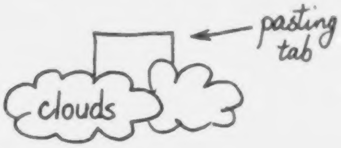
Author: ____________________ **Number of Pages:** ____________

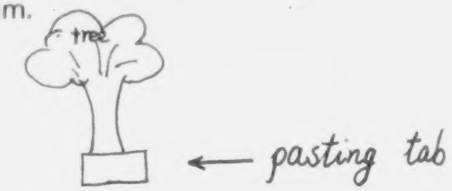
DIRECTIONS

You will need:

- 1 shoe box
- construction paper
- drawing paper
- scissors
- paste
- paint
- pen
- crayons
- paint brush

1. Cover the outside of the shoe box with construction paper.
2. Stand the shoe box on its side and paint the background you want on the inside. Paint ground, sky, mountains, oceans, or whatever you need.
3. Draw and color the things you need to put inside the box. You may need people, boats, trees or animals to name a few.
4. Before cutting out the figures, draw a "pasting tab" on the top or bottom of each figure. See diagram.





5. Cut out the figures with the pasting tabs. Fold the tabs over. Put paste on the tabs and place the figures inside the diorama.
6. Fill in the blanks on the diorama label. Cut it out and paste it to the outside top of your diorama.

Diorama Label

What:

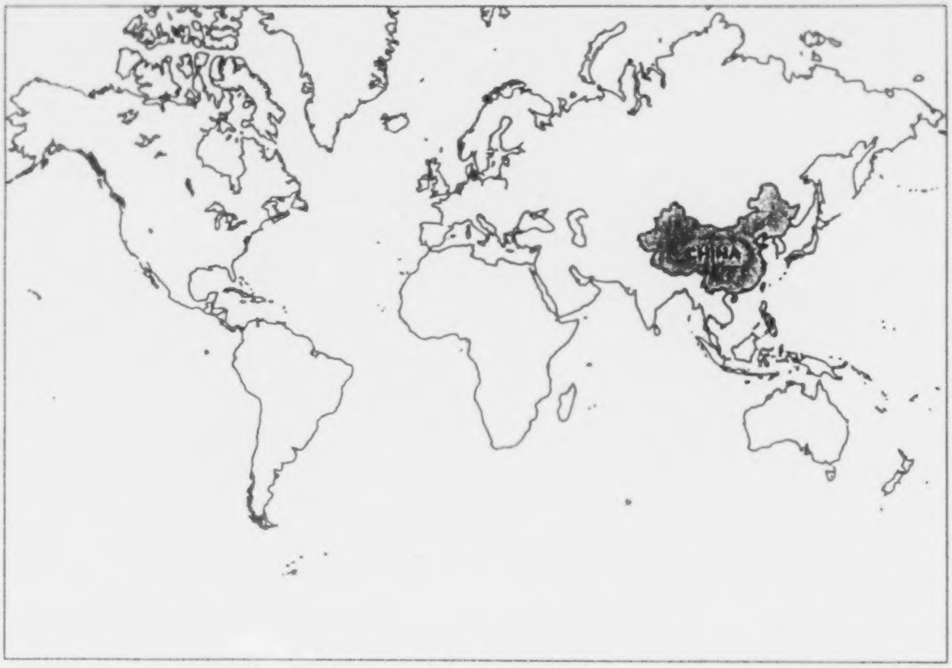
Where:

When:

By:

GRANDFATHER TANG'S STORY

Written by Ann Tompert
New York: Crown Publishers, 1990



Synopsis

With tangrams, Grandfather Tang tells Little Soo a story about Chou and Wu Ling, two fox fairies who try to outdo one another by changing into different animals. When Wu Ling changes into a rabbit, Chou becomes a barking dog, and so on, until their game goes further than either of them imagined.

This story-within-a-story text deals with issues of friendship and pride.

Background

Fox fairies are an integral part of Chinese folktale. They are believed to be endowed with supernatural powers of transformation. They are said to live from eight hundred to a thousand years. Ann Tompert, the author of Grandfather Tang's Story, became interested in tangrams when she saw books about Chinese puzzles in a catalogue. She ordered the books and began making up her own tangrams and stories about them.

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Curriculum Connections

- Have the children look at the cover of the book to identify the characters of grandfather and granddaughter. Discuss how the picture of the grandfather looks similar to or different from their own grandfathers. Tell children that the story is about a grandfather who spends some special time with his granddaughter. Ask children to share things they like to do with their grandparents or other adults.

- Invite children to tell about activities they participate in with older friends and relatives - such as playing catch, being pushed on a swing, digging in sand or swimming at the beach. Have children draw pictures of themselves and older friends or relatives as they participate in these activities. Using their story pictures, have the children sort their story pictures into groups related to each other. Display the sorted groups in graph form on the wall.

I like to ______________________ with my grandparents.
swim at the beach
read
watch TV
drive
go out to eat
go camping
go to the zoo

For example: "The same number of kids like to go to the zoo and watch TV with their grandparents." "Most kids like to read with their grandparents."

- Have a "Super Grandma/Grandpa Field Day." Have children create invitations to send to their grandparents, asking them to come to school for a day of Grandparent-Grandchild activities. You and the class can decide what these will be (for example,egg-and-spoon races, simple relay races, or other games of skill).

Multicultural Perspective

Help the children understand that stories from a particular country or culture often include animal characters native to the geographical area of the country or culture, and that these animals sometimes take on magical qualities. What animals are included in Grandfather Tang's story? Have the children look these animals up in the encyclopedia to discover if they are native to China. Ask the children which animals (real or mythical) they could include in a story reflecting the wildlife of their area.

Animal Tricksters

Encourage students to discuss other animal tricksters appearing in stories they know. List these characters and their countries of origin on the chalkboard. Discuss with students the differences and similarities in the animal tricksters they have mentioned.

Point out that almost every culture has animal tricksters in it. In Chinese stories, for example, the trickster is usually a fox or a wolf. In Japan, it is a badger or a hare. In Indonesia, the trickster is a small mouse deer. The continent of Africa has three tricksters: Anansi the spider, Zomo the rabbit, and Ijapa the tortoise. The coyote and the raven are tricksters who appear in Native American stories.

Give the students an opportunity to write an animal trickster. Help them organize their thoughts by folding their paper into seven columns. Label the columns: Title, Time, Setting, Characters, Events, Trick, Ending. Direct them to fill in the columns by using information on the class Animal Tricksters chart. Then using their information, have them write a story.

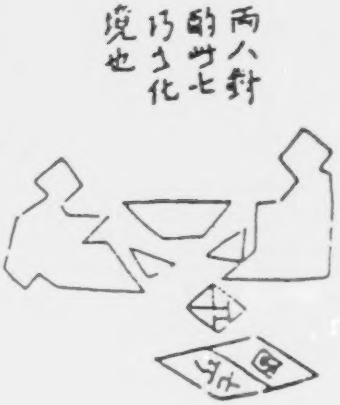
ANIMAL TRICKSTERS

TITLE	TIME	SETTING	CHARACTERS	EVENT	TRICK	ENDING

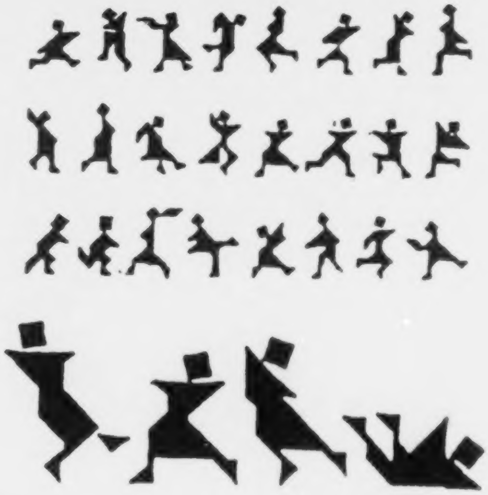
Tangram's Origins

Have the children research the origin of ancient tangrams in Chinese folklore. (According to one story, the tangram first came about more than 1000 years ago when a Chinese scholar named Tan was carrying a ceramic tile to the emperor. He accidentally dropped the tile and it broke into seven pieces. In his attempt to repair the tile, Tan discovered the pieces could be used to make other pictures and designs.) Challenge the children to gather and share as much information as possible about the puzzle. If the class's research results in conflicting stories about the origin of the puzzle, ask the children to hypothesize why so many explanations exist.

中國古代的七巧[illegible]的圖形



七巧板不但可以創出具有美感的圖形・還可組成各種「中國功夫」的動態人形・妙不可言・



Tangram Stories

A Tangram, call ***qi qiao ban*** in Chinese, is an old Chinese puzzle game. The player tries to make a silhouette shape using all the pieces of the qi qiao ban. Pass a tangram puzzle printed on construction paper to each student. Discuss the directions and silhouette examples. Students proceed by cutting out their own tangram, making a silhouette, and gluing their silhouette to another sheet of writing or construction paper. Have them write a story or a Haiku poem about their new creation.

Tell Tangram Stories

Have the students take turns working with the puzzle pieces to help tell stories. Begin by retelling Grandfather Tang's Story. As you tell the story, arrange the tangram pieces in a shape representing the first character appearing in the storyline. When a second character arrives in the story, have the student rearrange the puzzle pieces to resemble that character.

MATHEMATICS CONNECTION

- capacity
- classification
- comparison
- geometry

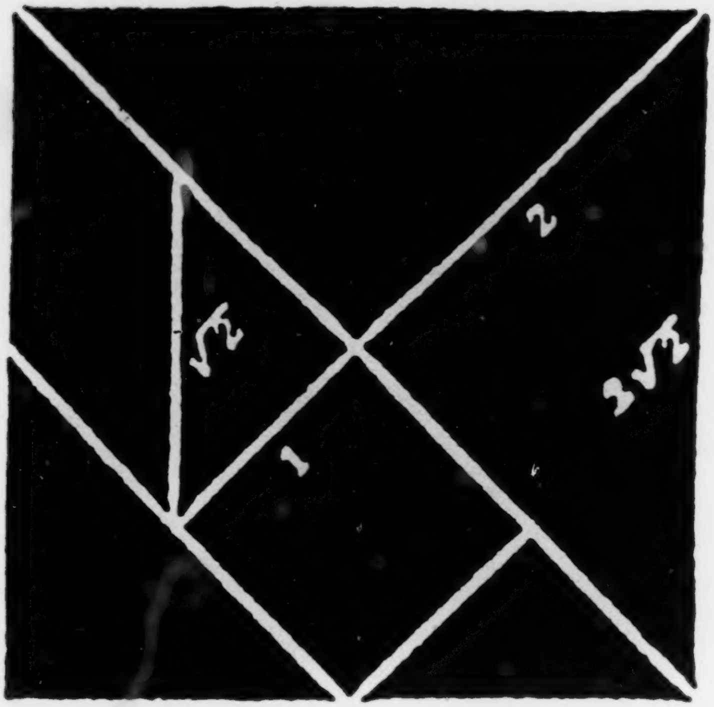
ACTIVITIES

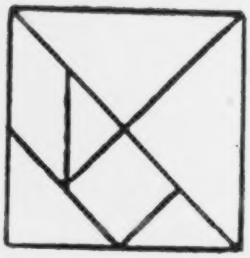
- Students can compare and classify the pieces of one puzzle according to size and shape. Introduce the triangle, square, and rhomboid.
- Encourage students to manipulate the tans to make different things. Remind them that all tans must be used in the design, and must be touching, but not overlapping.
- Provide outlines of things that can be made with tangrams. Encourage students to make their own tangram outlines to trade with their classmates and fill with tans.
- Make a bulletin board display of tangrams students have created and glued on colorful paper.
- Send a tangram puzzle home with each child. The homework assignment is to explain tangrams to a parent, construct a tangram for that parent, and draw an outline of a tangram the parent creates. The parent tangram outlines can be shared the next day in class.
- Use pattern blocks to create tangram-like animals and other shapes. A good source book for this activity is Pattern Animals: Puzzles for Pattern Blocks by Sandra Mogensen and Judi Magarian-God. (Cuisenaire Company, 1986.)

Chinese Tangrams

1. Draw the lines as shown in the following figure.

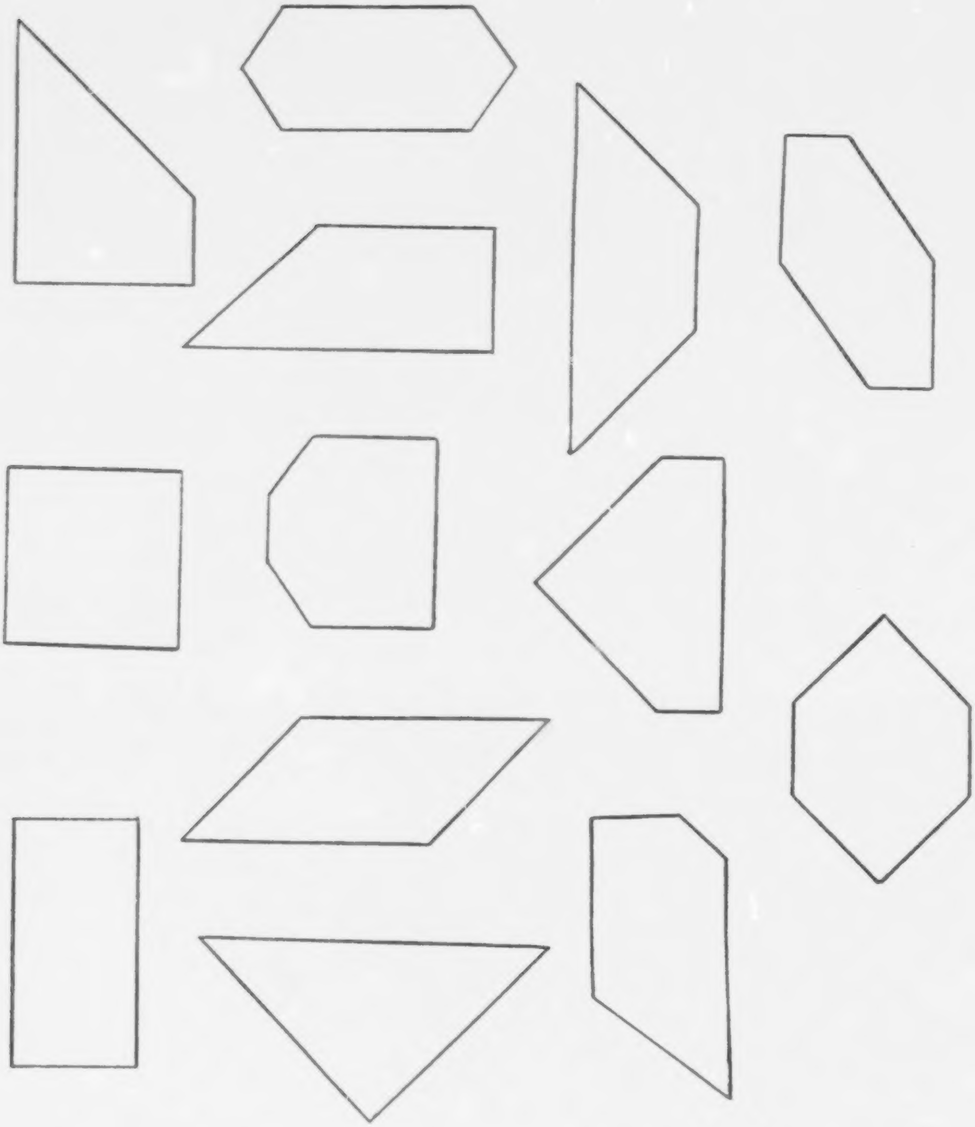
2. When your paper looks exactly like the figure below, cut on pencil lines. You will have seven pieces: five triangles, a square and a shape called rhomboid. The five triangles will be of three different sizes. Check that you are using the right size in the proper position.





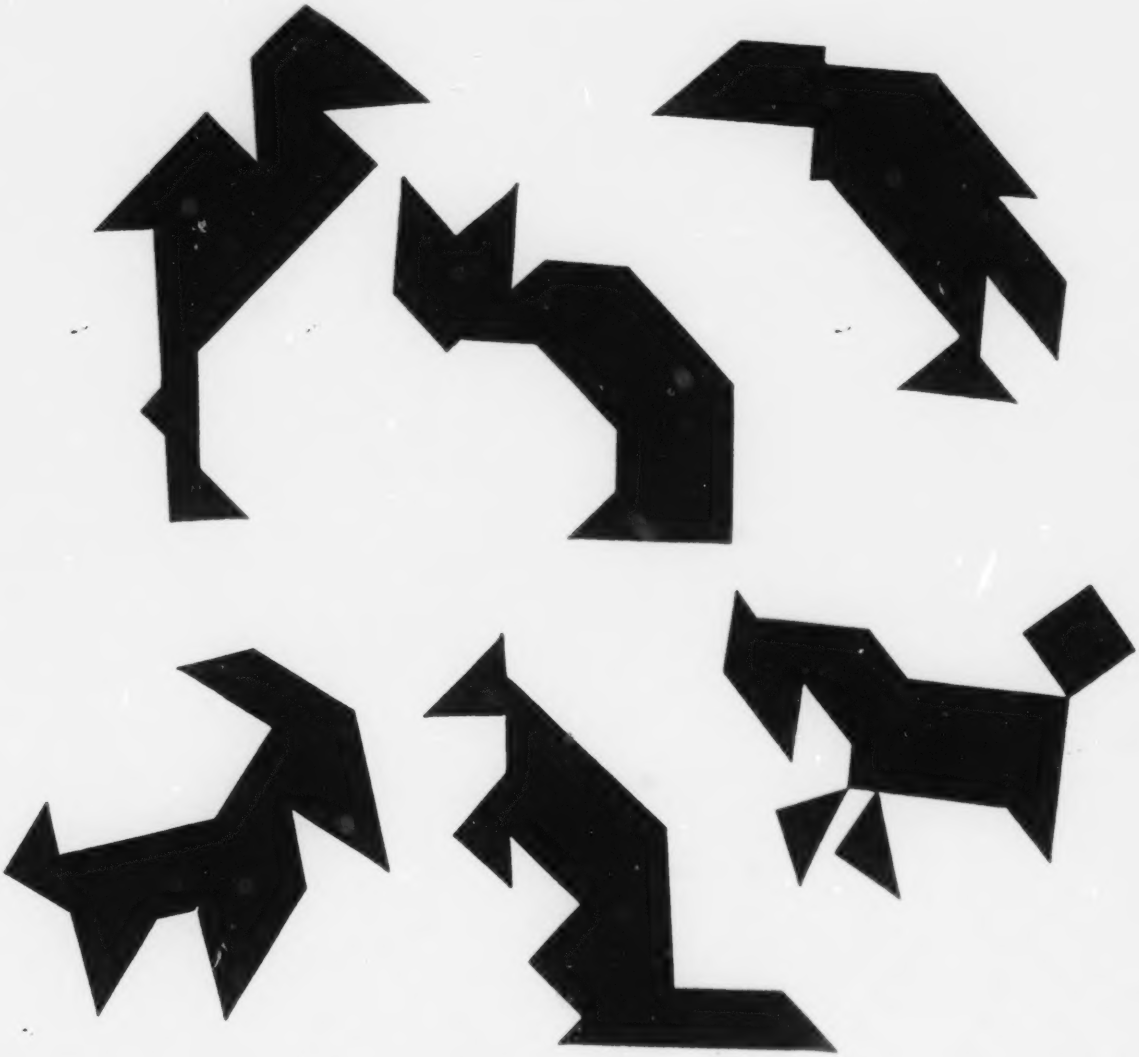
These puzzles have been enjoyed by Chinese children for hundred of years. The object is to make as many figures as possible, using these seven shapes that are created from a single square of paper. Here are several ways to place the seven pieces.

See how many of them you can make.



CAN YOU MAKE THESE ANIMALS?

Name the following animals and try to use the seven pieces of Tangrams to form these animal designs.



Animal Names: Pelican Cat Eagle Goat Kangaroo Horse

Science Connection

Children choose an animal from the story to research during theme activity time.

a) Children develop a K-W-L chart.

b) Children develop a semantic map based on the K-W-L chart they developed.

Example

Foxes like to

yap
howl
bark
whimper
hunt
steal chickens

Foxes are

members of the dog family
red
furry
good runners
smaller than wolves

FOXES

Foxes live in

the Arctic
underground burrows
wooded areas
zoos
deserts
farmland
towns and cities

Foxes eat

just about everything
worms
chickens
mice
birds
rabbits
apples
insects
fruits
bird's eggs

c) Children put their information in pattern form based on The Important Book by Margaret Wise Brown (Harper and Row, 1949).

The Foxes

The important thing about the foxes is that they have long bushy tails.

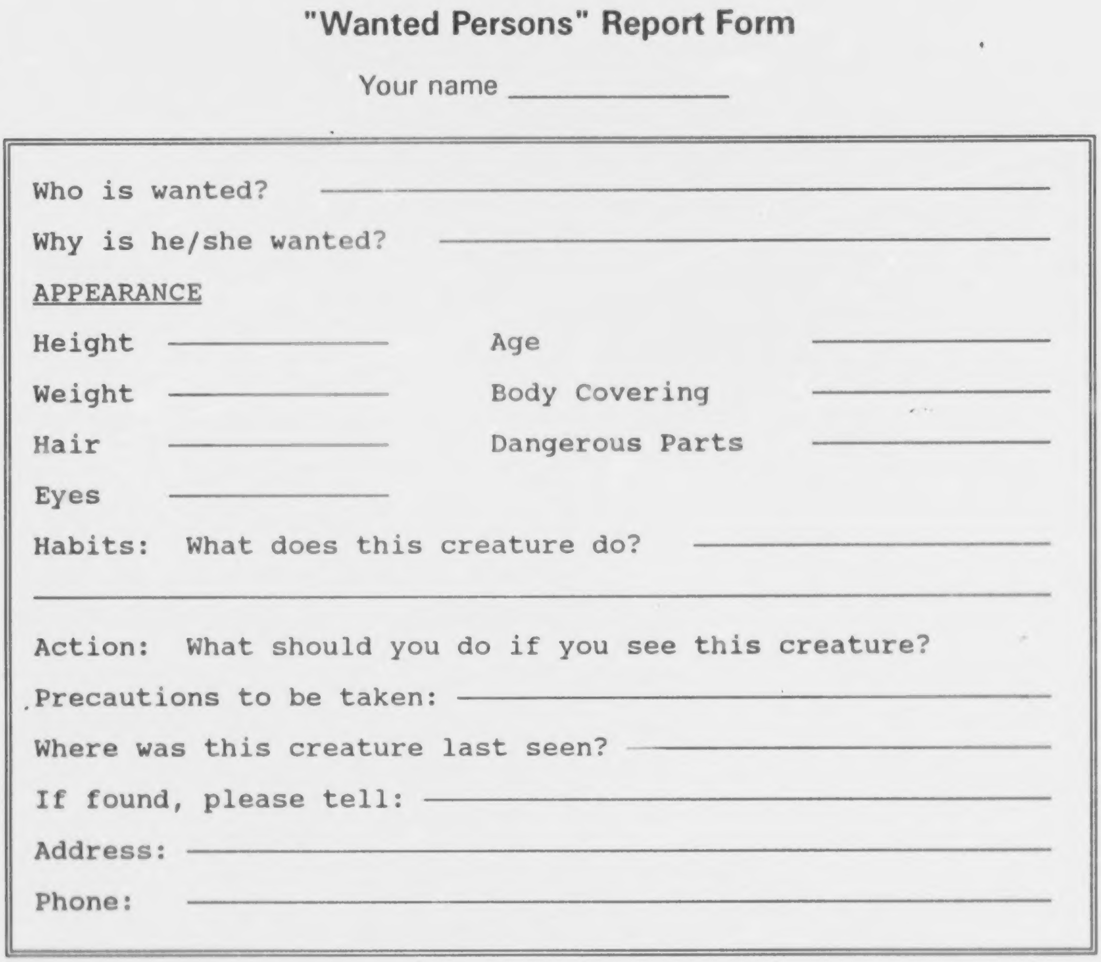
It is true that they are good runners.

It is also true that they are smaller than wolves.

But the most important thing about the foxes is that they have long bushy tails.

d) "Wanted Persons" Poster

On an overhead projector, show a copy of a "Wanted Persons" Report Form (see figure below) and record oral suggestions.



"Wanted Persons" Report Form

Your name ______________

Who is wanted? ______________________________

Why is he/she wanted? ______________________________

APPEARANCE

Height	________	Age	________
Weight	________	Body Covering	________
Hair	________	Dangerous Parts	________
Eyes	________		

Habits: What does this creature do? ______________________________

____

Action: What should you do if you see this creature?

Precautions to be taken: ______________________________

Where was this creature last seen? ______________________________

If found, please tell: ______________________________

Address: ______________________________

Phone: ______________________________

- Close the activity with an oral sharing of some of the ways the form can be completed.

Bedtime Stories

There are many stories about foxes. Some have been passed on from one generation to the next for centuries, so long, in fact, that no one is quite certain who told them in the beginning.

The popular animal stories, Aesop's Fables, are thought to have been told by a slave who lived about 600 B.C. in ancient Greece. In these stories, foxes and other animals act rather like people and show us just how silly we can be, as in the story of "The Fox and the Crow." The crow sitting high up in the branches of a tree has a large piece of cheese in its beak that the fox down on the ground would like to eat. The fox tricks the crow. He makes her sing, so she opens her beak and drops the cheese.

Foxes do not always get their own way in stories. In the Uncle Remus stories, Br'er Rabbit is the one who outwits poor old Br'er Fox. In real life foxes are most successful at catching rabbits.

Chinese youngsters are particularly fond of the account of a red fox that was captured by a fierce tiger. Although frightened, the fox did not lose its cunning and boldly stated, "You wouldn't dare eat me. The gods in heaven have made me leader of the animals. They would be most angry if you harmed me. I will prove how important I am. Let's take a walk." The fox placed himself in front of the tiger and the two began to parade through the forest. As they marched along, every animal they met turned and ran in the opposite direction as fast as it could. After a few minutes, the wily fox turned to the tiger and said, "You see how all the animals flee at my approach, afraid to face their leader. Now leave me before the gods punish you!"

And the foolish tiger did!

Fox Tales

In China, the fox (vulpes) is believed capable of assuming human form. Ancient Chinese lore maintains that a fox acquires the faculty to become a human at age 50, and on its 100th birthday becomes either a wizard or a beautiful maiden who will destroy any man unlucky enough to fall in love with her. However, there is a sure method of identifying a fox-maiden. Looking at the suspect's reflection in an old mirror will reveal her true shape. In the Southern United States thinking of a fox without a tail is considered a sure cure for hiccups. Farmers in Greece were convinced that a small amount of a fox's gall bladder - mixed in the food of their hens - would provide protection from vulpes.

When a youngster in Czechoslovakia loses a tooth, he doesn't put it under his pillow for the tooth fairy to find. Instead, the tooth is thrown behind the kitchen stove, and the fox is requested to replace it with an iron one. Commercial fishermen in Ireland have been known to refuse to leave port if they hear the word "fox" on their way to the docks. The Chinese burned incense in wayside shrines consecrated to the fox in hopes of propitiating vulpes.

Outfoxed

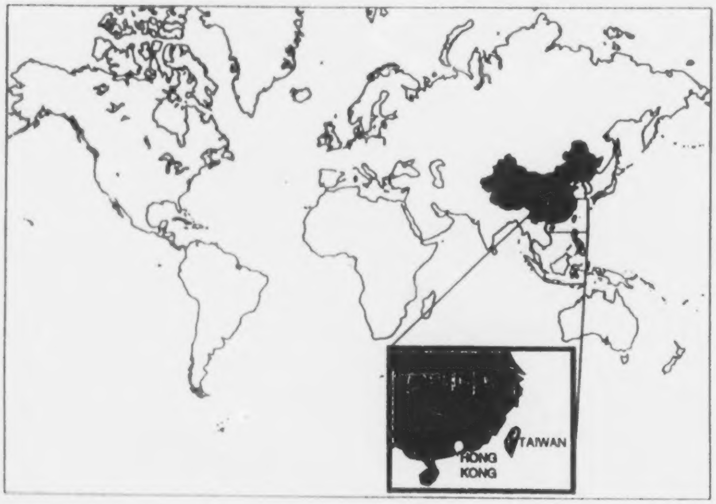
We often think foxes are smart animals, possibly because they seem to outwit people when they escape from hunters or break into the hen house. We use the expression "as sly as a fox" to describe a crafty person. Foxes do look rather crafty so it is easy to believe that they are up to no good.

Popular sayings are found in many languages. For example:

In German:	"The fox changes its skin but remains the rogue."
In Latin:	"The fox changes its fur but not its nature."
In English:	"A fox should not be on the jury at a goose's trial."
In Ancient Hebrew:	"Rather be the tail among lions than the head among foxes."
In Russian:	"If you forgive the fox for stealing your chickens, it will carry off your lambs."

OUR HOME IS THE SEA

Written by Riki Levinson and Illustrated by Dennis Luzak
New York: E.P. Dutton, 1988



Synopsis

As children follow a young boy on his way from school to the houseboat where he lives, young readers are treated to a trip through the busy city streets of Hong Kong. But the boy is not as interested in the city hustle as he is in the sea which surrounds his Hong Kong home. His mother says he will grow up to be a teacher, but in his heart the boy knows that, like his father and grandfather before him, he will grow up to be a fisherman and his home will always be the sea. Children will easily identify with this modern-day child's desire to follow the traditions of his father and grandfather.

Background

Before writing and illustrating this book, both the author and the artist traveled to Hong Kong to fully understand the city's colors, noises, and crowds. The author, Riki Levinson, found that the Chinese living in Hong Kong were very similar to her own family.

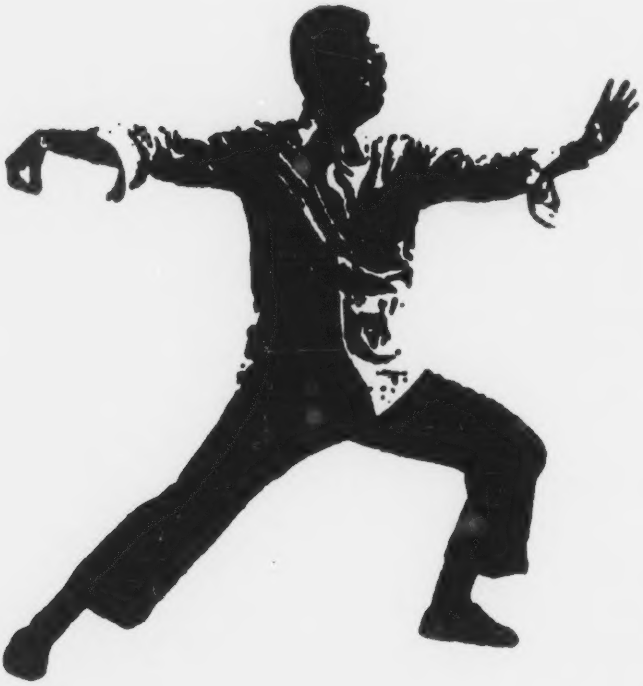
A British colony (until 1997), Hong Kong was founded as a place to conduct business and to trade. It is the world's third-largest financial center after New York and London. It is also known as the Wall Street of Asia, with banking, international insurance, advertising, and publishing among its biggest concerns. Although molded by the British, Hong Kong remains overwhelmingly Chinese, with Chinese medicine shops, street vendors, dim sum restuarants, old men who take their caged birds for walks in the park, and colorful festivals.

Curriculum Connections

Tai Chi Exercise

There are many parks throughout Hong Kong and the people there enjoy them in many ways. It is not unusual to see caged birds in the park. Each morning, bird owners take the birds to the park and enjoy their singing while they talk to their friends. Others practice Tai Chi. Tai Chi is a form of exercise that includes circular hand movements and intricate foot patterns. It emphasizes gentle force and inner harmony.

Have students look carefully at the illustration which depicts the old man with his arms extended under a gingko tree. Inform the children that the man pictured is performing Tai Chi, an ancient Chinese form of exercise. To further acquaint the children with Tai Chi, invite a Tai Chi instructor to the class to explain the philosophy and demonstrate the technique behind the movements, or borrow a Tai Chi demonstration video (available from libraries or video rental stores). Allow students the opportunity to practice and demonstrate Tai Chi movements. How does this form of movement differ from other types of sports and exercise the children are familiar with?



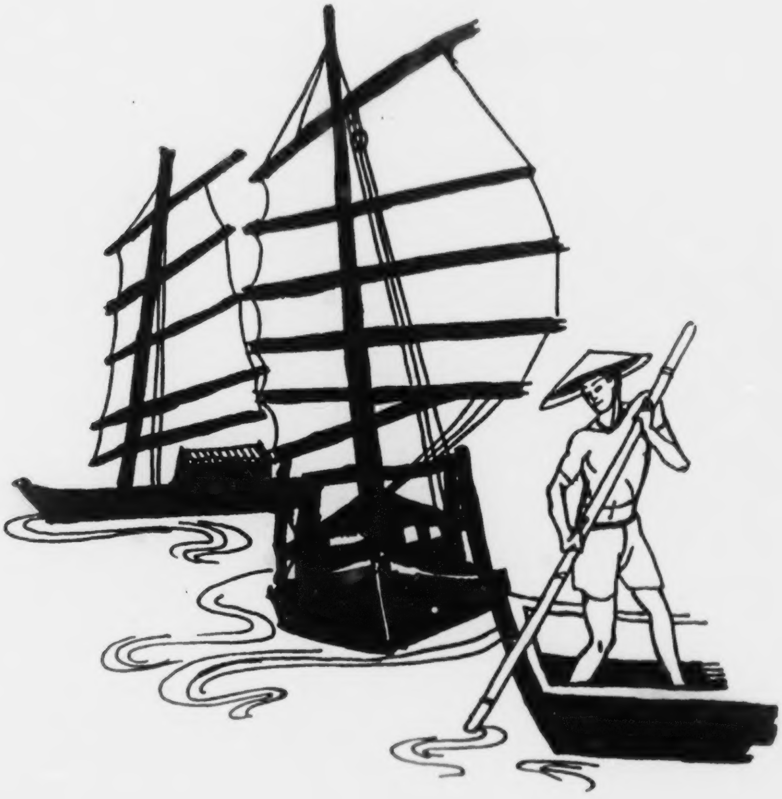
TAI CHI

- **Tai Chi Demonstration**

  Physical fitness is important in everyday life in China and Hong Kong. As illustrated in the story, people often practice Tai Chi in the park. The movements are very slow and involve all parts of the body, incorporating both balance and muscle control. It is a very popular exercise which can relax the mind as well as the body. Invite your students to try these simple Tai Chi movements.

  Stand erect, hands easily at sides, palms back. Heels are together, toes slightly apart. Sinking slightly with soft knees, shift weight onto right foot and step with left foot (toes straight forward) to the left side so that feet are shoulder-width apart. Distribute weight evenly on both feet. Let arms rise upward to shoulder height in front. Draw wrists toward shoulders, fingers slightly straightening. Continue circular movement, gently pressing hands down to sides again. The body rises slightly with arms and sinks again as arms return to sides. To encourage slow steady movement, play appropriate music.

- Hong Kong is a very crowded place. Even the rivers are crowded with hundreds of boats clustered together so that the rivers look like floating cities. The boats not only move products up and down the rivers but are homes to hundreds of people who live on the boats all the time. A common type of boat is called the Sampan. A Sampan is moved through the water by pushing a long pole against the river bottom. The person then pulls up the pole, walks down the length of the boat, and then pushes the pole again to continue moving the boat in the desired direction.



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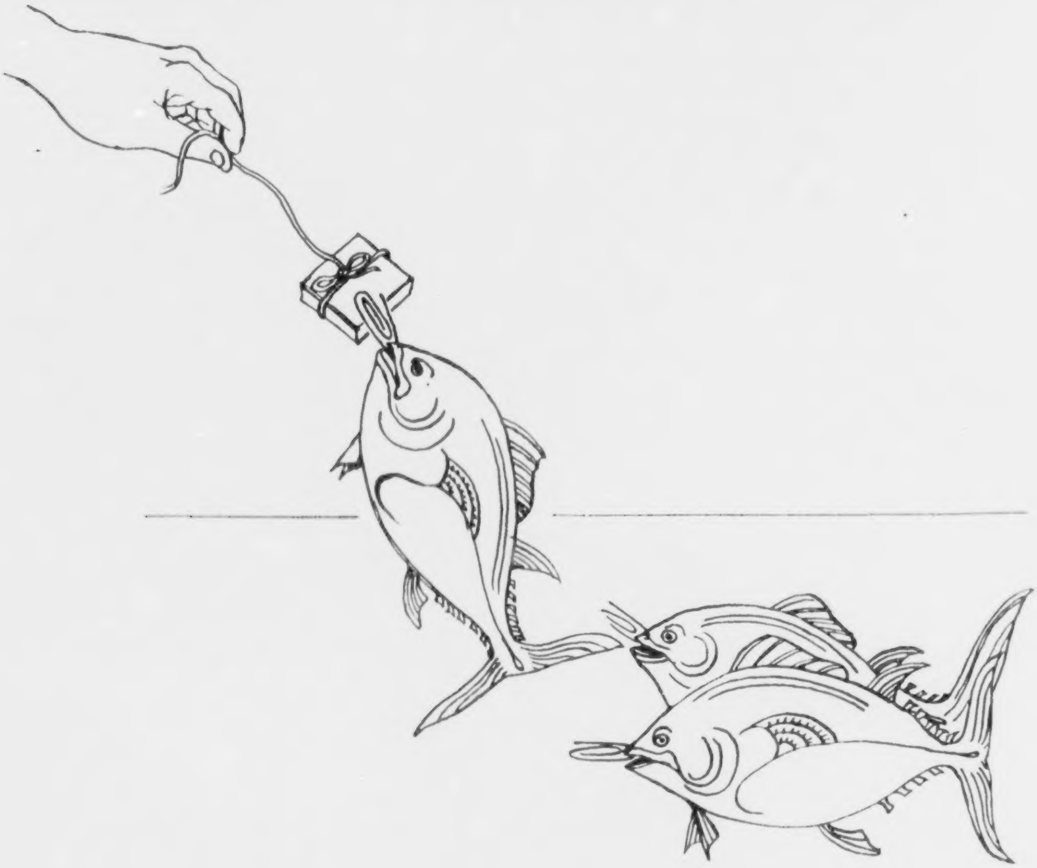
FISH CATCH

MATERIALS

- construction paper
- paper clips
- scissors
- string
- magnets
- tuna
- crackers

Fish is an important food for the Chinese living in Hong Kong. Give students an opportunity to imagine they are fishermen just as the little boy in the story so much wanted to be. Invite children to draw many different sizes of fish on paper. Help children cut out the fish and attach a paper clip to each fish's mouth. Tie a magnet (hook) to the end of a length of string (fishing line). Children can "catch" the fish by dropping the magnet near a fish's mouth. After all the fish are caught, spread some tuna on crackers and enjoy your catch! If possible, visit a nearby fish market.



DO A FISH PRINT

MATERIALS

- A fish: any fish with big scales will do. Flatfish make nice prints.
- A small sheet of glass or plastic, about 1 foot by 1 foot.
- Rice paper: you might want to experiment with newsprint.
- A small rubber roller from an art supply store.
- Block printing ink (water soluble).

DIRECTIONS

Fish are covered with slime that is produced by glands in the skin. Well ahead of time, wash the slime off with plenty of fresh water. Then blot the fish dry with paper towels. The fish must be completely dry.

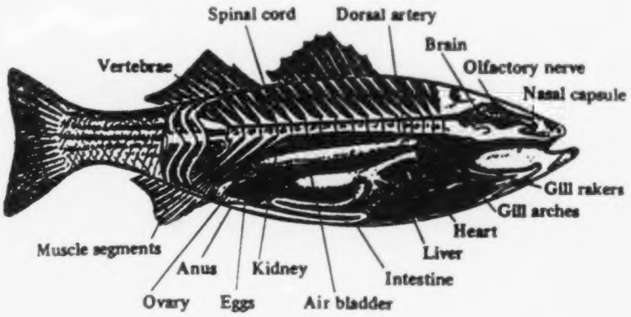
Scales are arranged on the fish's body like roof tiles. The front edge is anchored in the skin, and the back edge overlaps the next row of scales. This arrangement makes the fish more streamlined. Be careful in handling your fish. Wipe it from front to back to avoid pulling off the scales. The fish's fins all tuck in close to the body for streamlining. If you want them to show on your print, you will have to spread them out and anchor them with a small piece of clay.

Put a blot of ink on the glass and roll the roller over it until the roller is evenly coated with ink.

Quickly (**this ink dries fast**) roll the ink onto your fish from front to back on the side only. You only need a light coat, but make sure that you don't miss spaces.

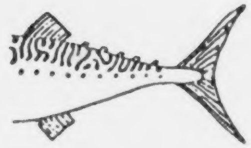
Move the fish onto a clean paper towel. Lightly and without sliding the paper, press a piece of rice paper or newsprint onto the inked fish with your fingers. Then carefully peel the paper off and look at your finished product!

Fish Dissection

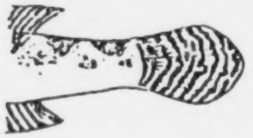

Spinal cord
Dorsal artery
Brain
Vertebrae
Olfactory nerve
Nasal capsule
Gill rakers
Gill arches
Heart
Muscle segments
Liver
Anus
Kidney
Intestine
Ovary
Eggs
Air bladder

TAILS

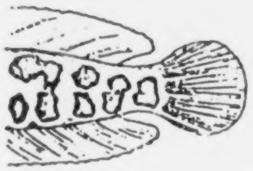
Sail Tail is one of the fastest of all fish, traveling at speeds estimated at more than 60 mph.



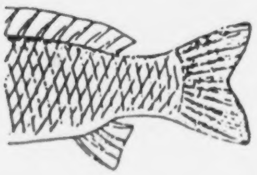
Fused Tail.



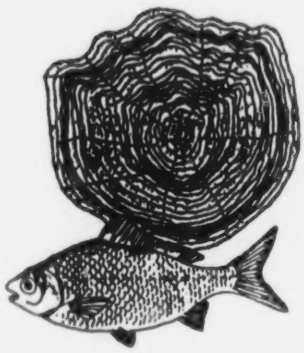
Cut-off Caudal. This square-ended caudal fin shows that it is a slow swimmer-usually grazing coral reefs, capable of only an occasional dash to safety.



Two-Lobed Tail is divided into 2 lobes. Each lobe consists of thickened fin rays, making the tail very strong but not very flexible.

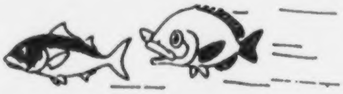
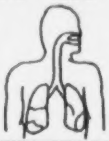
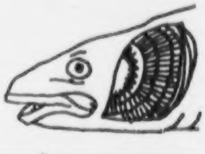
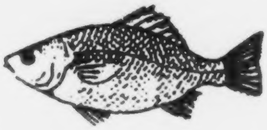


How Old?

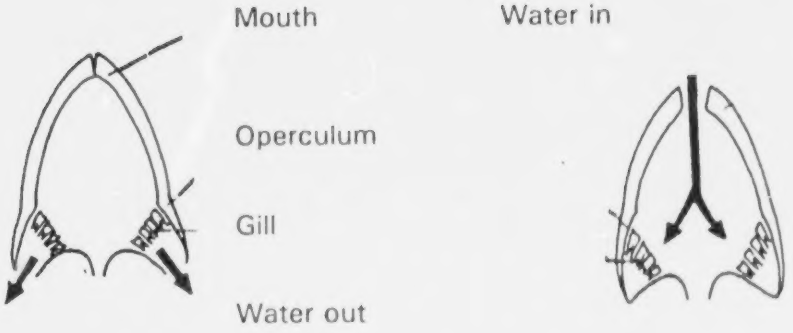


Under the microscope, a scale shows growth rings, like a tree trunk. Bony fish have roughly the same number of scales throughout their life. Several widely-spaced rings on the scales indicate a season of rapid growth for the fish.

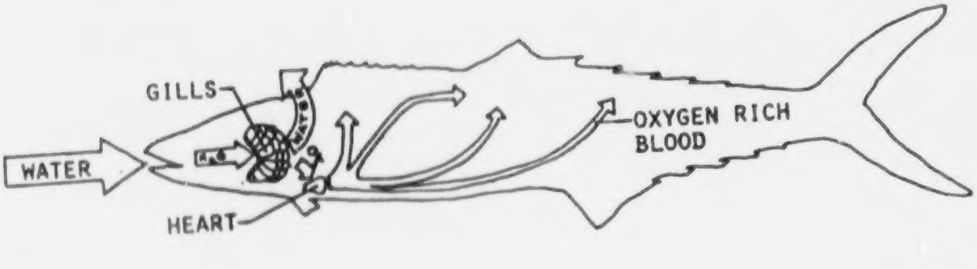
WHAT IS A FISH?

ON LAND	IN WATER
Air is less thick than water. It is easier to move through.	Have you ever tried to run in deep water? Water is much thicker than air, making it harder to move through. Animals whose survival depends on being able to move quickly in the sea are streamlined. Their bullet-shaped bodies let them slip easily through the water. 
Human beings get their oxygen from the air. The heart pumps blood through the lungs where it picks up oxygen for the rest of the body. 	The water passes over the gills on its way out the gill slit. The heart pumps blood through the gills where it picks up oxygen for the rest of the fish's body. 
Humans have skin covering their bodies. Skin keeps the moisture inside of the body from drying out. Sometimes humans put on extra clothes for protection.	A fish has skin just as humans do. Because it lives in water, it also has slime and scales. Slime is what makes a fish feel so slippery when you pick it up. It protects against infections and helps the fish slide through the water more easily. Scales are small hard plates that overlap each other like roof shingles. They are an armor-like protection for the fish's delicate skin. 

HOW FISH BREATHE


Mouth
Water in
Operculum
Gill
Water out

Fish breathe in water using their gills. Water flows past the rich blood supply in the gills. Oxygen passes from the water through the thin gill membrane into the fish's blood, which then distributes it throughout the body.


GILLS
WATER
HEART
OXYGEN RICH BLOOD

THINGS YOU CAN DO

STOMACH CONTENTS

The kinds of food a fish eats depend on where it lives, how large it is, what kind of mouth it has, and how it gets its food.

Find out what foods your fish eats. With the scissors cut completely across the rear end of the stomach where it joins the intestine. Carefully squeeze out the contents onto a piece of paper. If you are lucky you will be able to see exactly what your fish ate for its last meal.

How long ago was your fish taken out of the water?

This fish is fresh if:

1. The gills are bright red, not dull or grayish.
2. The gills have a fresh, salt-water smell. They should not smell foul.

There is tremendous variety in the shape and size of fish. Why is this so? Make silhouettes of several unique fish and put them on a wall display of an underwater environment. Colored tissue paper and watercolors make efficient and realistic backgrounds for ocean scenes.

Fish live at different depths in the ocean. This is called the water column. When placing the fish silhouettes on the display, follow this general rules:

(a) Surface area — small fish, floating algae, and plankton
(b) Middle depths — quick-moving fish, fish with streamlined body shapes, predatory fish
(c) Bottom/floor area — slow-moving fish, fish which hide in or blend with the ocean bottom, flat fish, sea creatures which eat food that collects on the ocean floor

Visit a fish market or grocery story and see how many different sea animals can be purchased in your area. Where do the various creatures originate (e.g., Alaskan king crab, Maine lobster)? What are the prices per pound?

Using the World Almanac, identify the countries that engage in commercial fishing. List the top ten in order. Where is the United States ranked? Where is Hong Kong ranked?

SAMPLE CONGEE

Congee is a thin rice soup. In the story, the boy and his family dine on congee and tea. Make congee and tea for your students.

Congee Soup

Ingredients

- ½ cup of rice
- 4 quarts of water
- ¼ pound of dried shrimp
- a dash of salt

Place ingredients together in a large pot. Bring to a boil and simmer for three hours. Serves 8-10.

TEA

The Chinese have been drinking tea for centuries. Tea is thought to help clean the palate and aid in digestion. Tea is an integral part of the Chinese way of life and is drunk everywhere in China at all times of the day and evening.

There are many kinds of Chinese tea, but generally they can be divided into three types — green, black, and oolong. Green teas are mild in flavor. Jasmine, the most popular, has a delicate, flowerlike taste and aroma. The black teas have a stronger taste. Oolong is a pale brown tea with a distinctive flavor often compared to that of fresh peaches.

Chinese tea usually comes in loose form rather than in tea bags. It is drunk plain; sugar, lemon, or cream are never added. The following method of preparing tea will give the best results.

1. In a teakettle or saucepan, bring water to a boil.
2. Take a teapot (earthenware or china is better than metal), and rinse with boiling water.
3. Measure loose tea into the pot. You may use 1 teaspoon of tea for each cup of water, but the exact amount is really up to your own taste. (You'll probably have to experiment a little to brew it just the way you like it.)
4. Pour boiling water into the teapot to make the right amount of tea according to the strength you like.
5. Cover the teapot and let stand for a few minutes.
6. Pour tea directly into cups.

SOME FACTS ABOUT TEA

Jasmine, oolong, black, green -- these teas come from the same plant. The word "tea" comes from the Amoy dialect's word for tea, pronounced "tay." In Cantonese, it is "chah." The British introduced tea drinking to America. The tea thrown overboard in the Boston Tea Party was imported from China by the British.

- Find out which countries export tea to the United States.
- What is the difference between regular tea and tea made from herbs?

PROVERBS ABOUT PATIENCE

MATERIALS

- drawing paper
- crayons or markers

Ask children to identify actions or words from the story that indicate the little boy's impatience. For example, "he ran to the tram, hurried down the stairs, and could not wait for the light to turn green." Chinese proverbs are learned as a way of expressing a truth or explaining an important lesson. There are many Chinese proverbs about the virtue of patience. Children may be familiar with some proverbs about patience, such as **"A watched pot never boils"** or **"Haste makes waste."** Share the following Chinese proverbs about patience with your students.

"A person in haste cannot eat warm bean curd."
(Since bean curd making takes some time, one cannot have it if he or she is impatient.)

"A person cannot become fat with just one mouthful of food".
(One cannot become successful with just one try. A person must be patient and continue to try and try again until he or she succeeds.)

Invite students to draw a picture illustrating a time when they were not patient. Encourage students to write or dictate one of the Chinese proverbs about patience beneath the picture as a reminder.

The author gives insight into how the little boy really feels by describing his emotions. The little boy "couldn't wait" for school to be out. He also wished for peacock feathers and that he could be a fisherman one day. Help children understand that although this little boy lives many miles away, he is very much like them in many ways.

- Have you ever been so anxious for something to happen that you just couldn't wait? When?

- The little boy wished he didn't have to go to school. He also wished that he had peacock feathers and that he could be a fisherman one day. What do you wish for? Write the boy's thoughts in speech balloons.

MAPPING

Mapping activities encourage children to sequence stories in a meaningful way.

MATERIALS

- Chart paper
- Markers, crayons
- Supplies for illustration

DIRECTIONS

1. Have children make maps depicting the boy's route from his school to his home.

2. Ask the children to recall the first place or character mentioned in the story. Write the name on the map, or attach a picture cue. Continue with this procedure until all the components of the story are included on the map.

What do you see? Have children describe things they see every day on their way to school. On a sheet of oaktag, create a chart similar to the one below, recording a response from each child in the class.

Gary	I see the park on my way to school.
Shannon	I see a tall building on my way to school.
Melanie	I see a pet store on my way to school.

"ME" COLLAGE

Step 1: Collect or draw pictures about yourself below.

Step 2: Cut out the pictures. Add additional pictures and/or words that describe you. Arrange all in an interesting and appealing collage. Mount on construction paper.

Me	My Home
How I Get to School	A Chore I Do
My Family	Something I Want to Do
Something I See at School	Something I See On My Way Home

Hong Kong vs New York City

Have children record things found in the story (e.g., a tram, birdmen, amahs, peacocks, a sampan, etc.). Have them record things that can only be found in both places (e.g., the sea, parks, apartment buildings, etc.).

Found in Hong Kong	Found in New York City	Found in Hong Kong and New York City

LION DANCER: ERNIE WAN'S CHINESE NEW YEAR

Written by Kate Waters and Madeline Slovenz-Low
and
photographed by Martha Cooper
New York: Scholastic, 1990

Synopsis

Gung Hay Fat Choy! Wishing you good fortune and happiness! Ernie Wan, a six-year old, shared the wonder and excitement of the Chinese New Year with his family in New York. The celebration centered around Ernie's first Lion Dance on the streets of New York City.

Background

The Chinese New Year comes on the first day of the lunar calendar, varying from January 21 to February 19. The Chinese New Year is a time for families to get together. The houses are cleaned, tools are fixed, clothes mended, and all debts paid. The Chinese receive new clothes and money in small red envelopes called "hong-bao" (in Mandarin) and "lai-see" (in Cantonese). Bright red, the color representing good fortune, is seen everywhere. People set off fireworks and firecrackers to frighten away evil spirits. When people meet, they say "Gung Hay Fat Choy" (Happy New Year).

The Dancing Dragon is a significant symbol in the Chinese New Year's celebrations. It winds its way up and down the streets to bring good wishes and scare away evil.

Curriculum Connections

Chinatown

For some, Chinatown is home. It's the neighborhood where one grows up, attends school and works. For others, Chinatown is a place one visits on Sundays to shop, to see elderly and newly-arrived relatives, and to drink tea (yum char) and eat dim sum. For others, Chinatown is an exotic tourist quarter of restaurants, curio shops, and street vendors, No one, or combination, of these views represents an authentic Chinatown. Rather, they tell us how Chinatown has been constructed and reconstructed.

We Always Called It Tong Yehn Gaai... Chinatown, My Chinatown...

What do you see when you think of Chinatown?

Although Chinatown may be a relatively small area, it contains many diverse experiences and stories. Gender, class, race, ethnicity, age, and language, for example, have shaped a people's view of the world around them and influenced how they move within, into, and out of Chinatown.

- **Mental Map Station**: Make your own mental map of Chinatown. Start with the places you know best. Show us your Chinatown.

- **Chinatown Scrapbook**

What memories of Chinatown do you have? How do these memories contribute to a broader history of Chinatown?

For example:

- Picking up the week's mail at a grocery store owned by fellow villagers or family members.
- Going to Chinese school after regular school.
- Watching a Bruce Lee film on a Saturday afternoon.
- Personal memories of everyday experiences and special events lead to a broader understanding of the history of Chinatown's social, economic, cultural, and political life.

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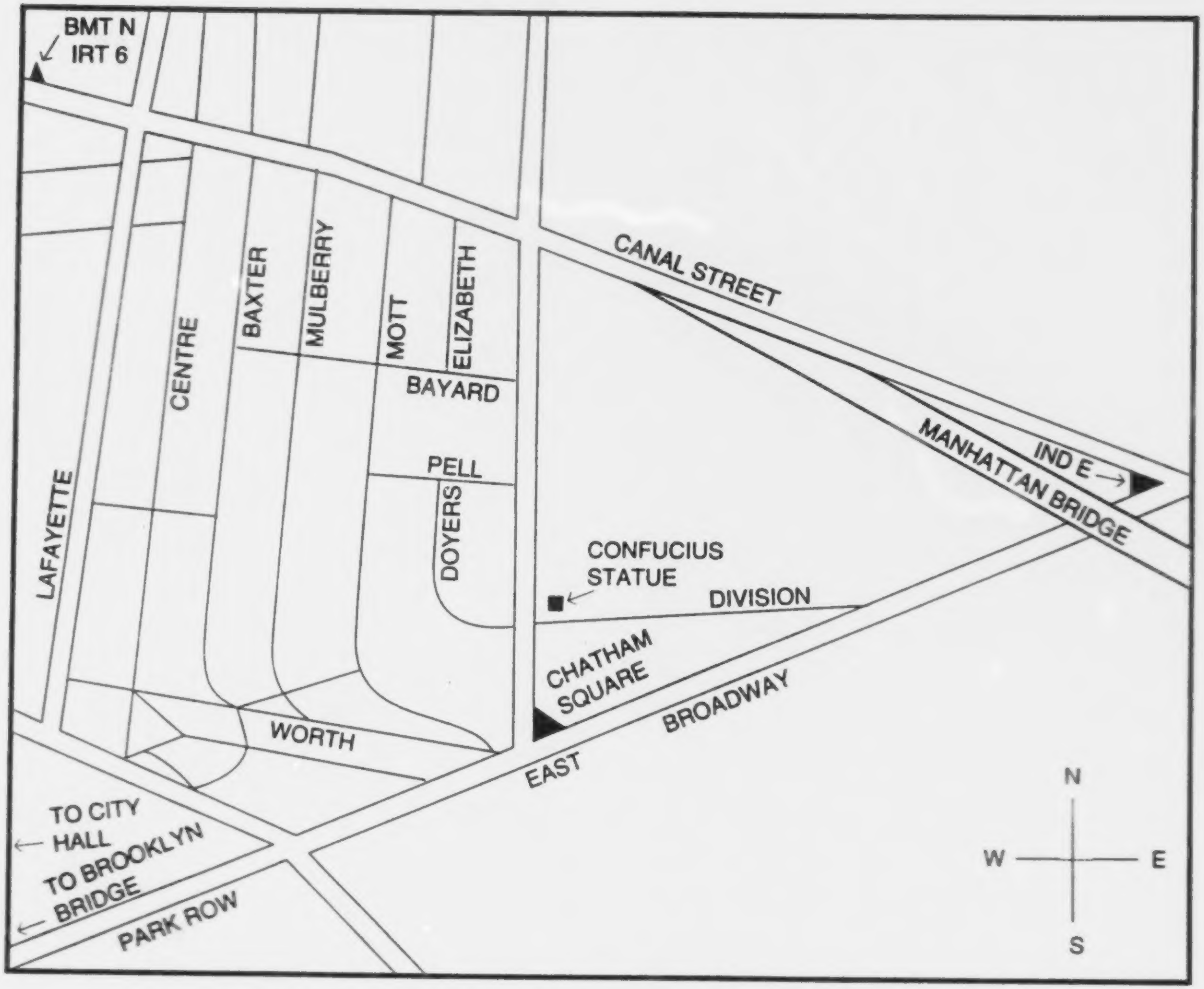
MAP OF CHINATOWN


BMT N
IRT 6
CANAL STREET
MANHATTAN BRIDGE
IND E →
CENTRE
BAXTER
MULBERRY
MOTT
ELIZABETH
BAYARD
PELL
DOYERS
LAFAYETTE
CONFUCIUS STATUE
DIVISION
CHATHAM SQUARE
WORTH
EAST
BROADWAY
← TO CITY HALL
← TO BROOKLYN BRIDGE
PARK ROW
N
W
E
S

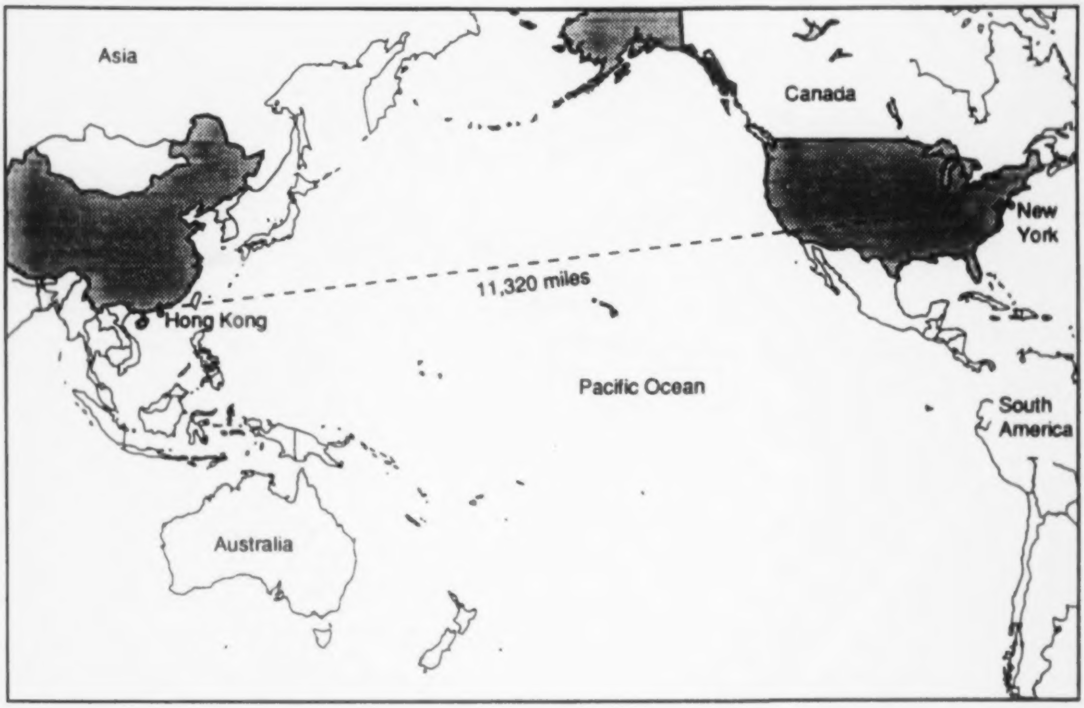
ROOTS/ROUTES/ROOTS

Why did your family leave? Why did they choose New York?

New York's Lower Manhattan has been home to numerous groups of immigrants. Since the early 19th century, people of Chinese descent have settled in New York City. Faced with the scarcity of farmable land and work opportunities in their native villages, many left home to find prosperity. Some boarded ships to Gold Mountain (the metaphoric name for the United States) in search of its fabled riches. Others worked aboard European trading vessels, settling and laboring in foreign port cities before making their way to this country. Hua qiao or overseas Chinese have brought with them a diverse home culture as well as something of the other cultures they experienced on their journeys.

- **Routes Tabulation**: Choose the category which best describes the route your family took in coming to New York City.

- **Map of Family Immigration Route(s)**: Show us how your family traveled to the United States by drawing the route.



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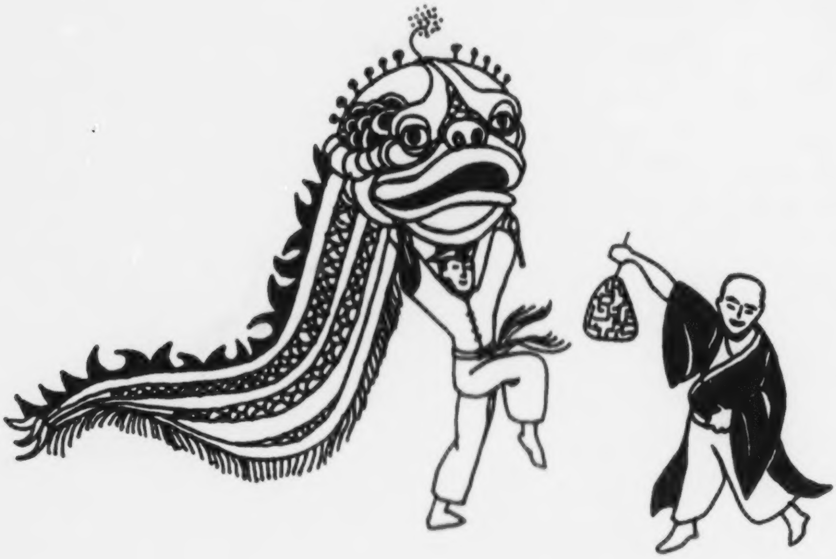
LION DANCE

The different forms of dance can be divided into the "northern lion dance" and the "southern lion dance." In the northern lion dance, the lion is lifted higher; in the southern lion dance, a lower posture is used. There are various kinds of lions, such as the closed-mouth lion, the open-mouth lion, Canton lion, Peking lion, etc. Southern lion dance performances are usually a series of stories, but northern lion dance performances use separate stories. The Canton lion performance involves the snatching of gems, while the Peking lion dance emphasizes acrobatic actions such as globe-riding.

Closely examine the lion head Ernie used for his dance. Discuss some of its features. Divide the class into small groups of three or four. Invite each group to make a lion head (see directions on the following page). Encourage students to be creative and use a variety of materials, such as egg carton eyes, brightly colored strips of paper, and shiny glitter. Invite parents to help with this project, if at all possible. Children will need some assistance and the project may extend over several days. After the projects are completed, encourage each group of children to perform their own Lion Dance. Be sure each child gets a chance to wear the lion head, just as Ernie did.



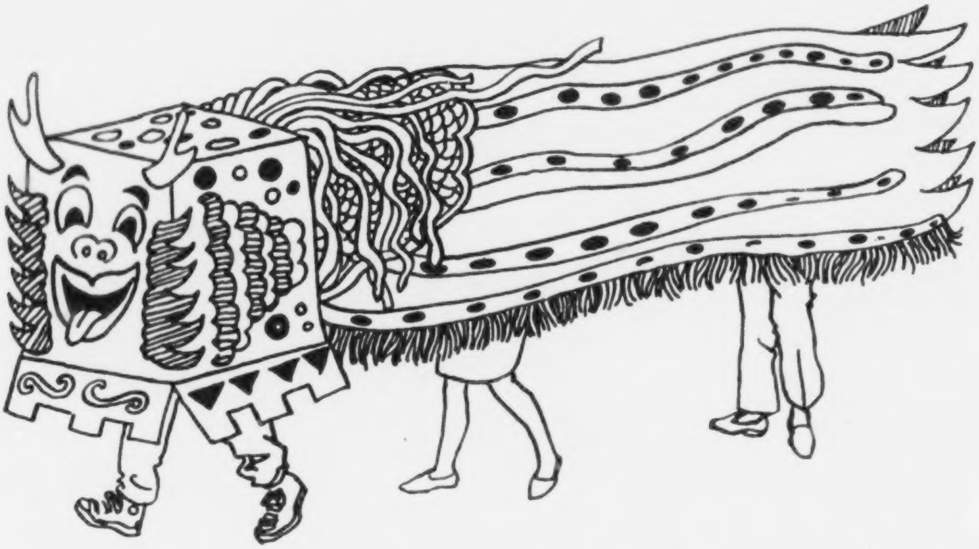
LION'S HEAD COSTUME

MATERIALS

- Large cardboard box
- Sheet dyed a bright color
- Assorted art scraps
- Poster paints and brushes
- Tissue paper

DIRECTIONS

1. Paint and decorate a large cardboard box to resemble the head of a lion.
2. Attach, to the head, a sheet which has been dyed a bright color.
3. Use 2 to 3 children under the box and sheet to dance and join in the parade.



NEW YEAR CELEBRATIONS

Ernie Wan explains many Chinese customs and traditions that are associated with the New Year celebration — wearing new clothes, giving and receiving red envelopes filled with money, and lighting firecrackers. Ask students to compare Ernie's celebration with their New Year celebration activities.

- Read Chinese New Year by Tricia Brown or Gung Hay Fat Choy by June Behrens for some additional detailed information about the celebration.

- Learn about New Year celebrations in other countries. Read Happy New Year by Emily Kelley. Are there any customs which are similar to each other?

The Children may:

- Tell how their families celebrate the New Year.

- Share some of the highlights of the celebration in their homes.

- Do some research on the Chinese Zodiac to find out what animal rules the present year. Let students read about the year in which they were born. Have them find out in which year other members of their families were born.

- Prior to reading the book, read just the title to the students and ask them to predict what the story will be about. Try doing a word web with the word "lion" in the center, and write other words that relate to it around the central word. Talk about different kinds of dancing and ask who in the class takes dance lessons for tap, jazz, ballet, and so forth.

- Locate China on a globe or world map. Talk about the setting of the story as being not in the country of China, but in an area of New York called Chinatown. Also locate New York City on a map.

- The lion dance is supposed to bring good luck. What other symbols of good luck can the class think of? Some examples might be a lucky horseshoe, a four-leaf clover, and a rabbit's foot. What are some signs of bad luck? Examples include breaking a mirror, walking under a ladder, and a black cat crossing your path.

- The story mentions that red is considered to be a lucky color. Have the class brainstorm a list of things that are red. Make some lucky collages using only pictures of red things. You can use cutout pictures from magazines, or have the students draw their own. Cut out letters from magazines in many different styles, spelling the word "red" several times in the collages.

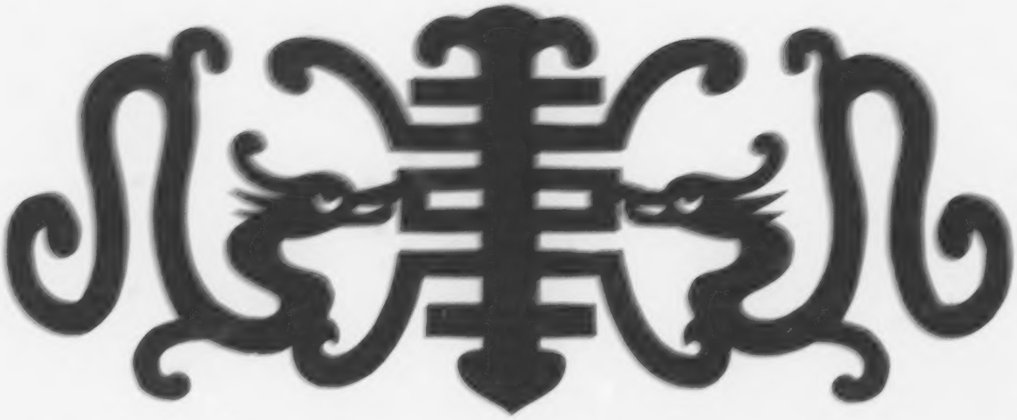
- Take out some brightly-colored scarves and ribbons. Find some Chinese music at your local library, and play it during gym class. Have the children move to the music to create their own lion dance. Have them pretend that they are lions and move as a lion does. Play the traditional game "Duck, Duck, Goose," only change it to "Lion, Lion, Roar."

- Have a parent or person from the community who is of Chinese descent come to discuss some of the special customs, foods, and language that is part of their heritage. You might be able to visit a Chinese restaurant if you have one in your community, or ask the chef to come and demonstrate some Chinese cooking in your classroom. Bring in some of the special foods used in Chinese cooking to show your class, such as bean sprouts, bok choy cabbage, and ginger root. Try growing some sprouts in your science area.

GUNG HAY FAT CHOY

- Make a large red banner which says **"Gung Hay Fat Choy"** (which means **"Wishing you good fortune and happiness"**).
- The Chinese New Year wishes are: fortune, honor, longevity and happiness. These words are written in Chinese below. Enlarge and photocopy these words, mount them on origami paper, and give them to the parents as New Year cards.

Fu	Lu	Shou	Xi
福	禄	寿	禧
Fortune	Honor	Longevity	Happiness



RED ENVELOPES - LAI SEE

MATERIALS

- 6" (15.3 cm) red construction paper squares
- gold stickers
- Gold glitter or gold pens

DIRECTIONS

Uncle Jimmy gave Ernie a red envelope with money in it. These special red envelopes are called "**Lai See.**" The envelopes are often decorated with gold calligraphy. These envelopes are given to express good wishes.

Give each child a 6" (15.3 cm) red construction-paper square. Ask the children to write or dictate special good luck wishes in the middle of one side of the squares. Help children fold up the corners of the squares to the center. Place gold stickers in the centers to secure all four corners and seal the messages. Encourage children to use gold glitter or gold pens to decorate the outsides of the special message envelopes. Collect all the completed messages and distribute them randomly. Ask the children to open the envelopes and read their good luck wishes.

LANGUAGE LESSON

There are many Chinese dialects. Most Chinese-Americans are descendants of immigrants from Guangdong Province where Cantonese is spoken. People from Shanghai and Fujian speak entirely different dialects. Many Americans are learning Mandarin, a dialect of the northern provinces of China and the national language of China and Taiwan.

Give children the opportunity to more closely identify with Ernie by trying to learn some Chinese words or sayings. Here are some useful phrases that might be fun to learn.

English	Mandarin	Cantonese
How are you?	Ni hao (nee-how)?	Nei ho ma?
Fine, and you?	Hen hao, ni ne?	Gei ho, nei ne?
Good-bye.	Zai jian (sai-jien).	Joi gin.
Thank you.	Xie xie (shei-shei).	Doh je.
Please.	Qing (cheeng).	Cheng.

CHINESE WRITING

MATERIALS

- drawing paper
- black paint
- paintbrushes

Ernie went to a special school on Saturdays to learn to read and write Chinese. He found writing to be the hardest to learn. Students can try writing the Chinese characters for the numbers 1-10. Show the children how to draw each character using black paint and a brush. Model the strokes on an easel or chart in front of the room. Invite children to copy the strokes using paint, brushes, and paper at their desks.

CHINESE HELLO BOOK

The Chinese word for "hello" is "ni-hao" **(pronounced nee-how)**. Create a patterned big book by following these directions.

Write a personalized ni-hao sentence (**examples below**) at the bottom of each big book page (**large sheet of oaktag or butcher paper - 18" x 24"**), one sentence/page per student.

Mei-Mei says
"ni - hao"

To:

Ming says
"ni - hao"

To:

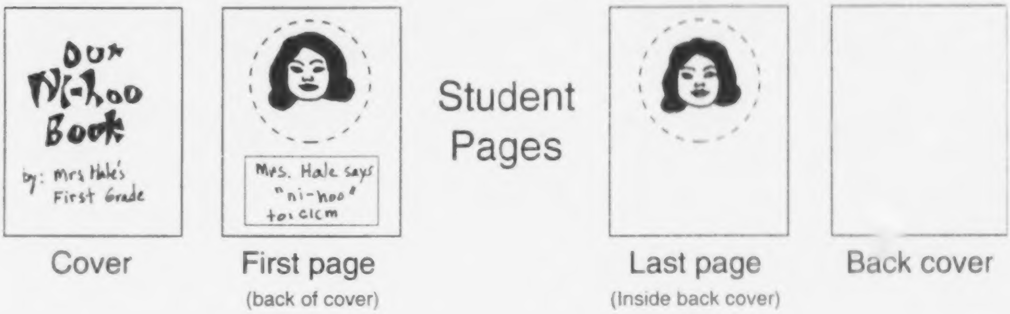
Create the front and back cover of the big book. On the front cover page, state the title and the authors. On the other side of the front cover page **(which acts as the first page)**, draw a picture of your face. Cut out and glue your personalized ni-hao sentence to the bottom of this page. On the last page **(facing the inside of the book)**, draw, cut, and glue a second picture of your face. The other **(blank)** side of this page will act as the back cover.

Example:

A. Teach students how to pronounce "hello" in Chinese (ni-hao = nee-how). Explain that they are going to make a special Chinese Ni-Hao Big Book.

B. Have students draw two pictures of their own face on two separate pieces of white construction paper (12" x 18") and cut out carefully.

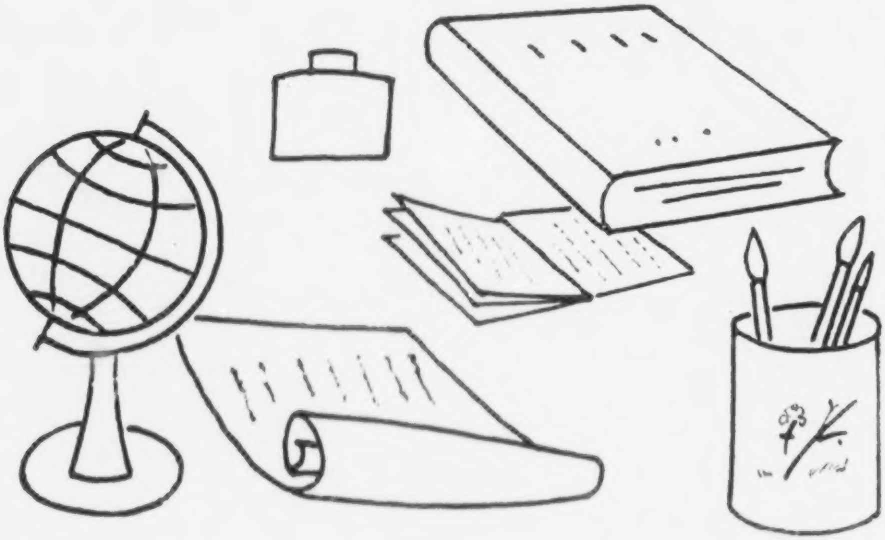
C. Give each student his/her personalized big book page. Tell them to glue one face on each side of the page. Collect and stack pages starting with your pre-made title page **(title side facing up)**, their pages **(all pages with the side containing just their face facing up)**,and your pre-made pack page **(just your face facing up)**. Bind.



D. Gather students around the big book, along with the cut-out ni-hao bubbles, a thick marker, and a glue stick. Read the title together. Open up the book and read the first page. For example: "Mrs. Hale says hello to ______." Look to see whose picture is on the opposite page (for example, Mei-Mei). Write Mei-Mei in the blank space with the marker. Take three ni-hao bubbles, add a dab of glue to the backs, and place around Mei-Mei's picture. Reread the completed sentence and ni-hao bubbles, "Mrs. Hale says ni-hao to Mei-Mei...ni-hao, ni-hao, ni-hao!" Turn the page and read the next pre-written sentence, "Mei-Mei says ni-hao to _____." Look to see whose picture is on the opposite page. Write the name in Mei-Mei's sentence. Ask Mei-Mei to come up and glue three ni-hao bubbles around the picture of her classmate. Reread the sentence and the ni-hao bubbles together, "Mei-Mei says ni-hao to Ming...ni-hao, ni-hao, ni-hao!" Continue until all sentences have been completed. Remember, the last page (inside back cover) will be the second picture of the teacher.

ASIAN STORYBOOKS

In Chinese culture, books are read from the back to the front. (If possible, show the class actual books from Chinese bookstores, food markets, the library, or friends!) Just for fun, have students write a story which will start on the back page and be read to the front.



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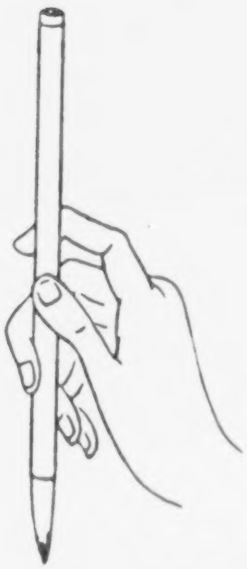
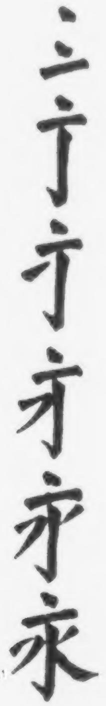
PROPER WAY TO HOLD THE BRUSH

Chinese calligraphy may seem simple, but it is not. Calligraphers work for years at their craft. First, a student learns how to hold a brush. If you want to try a Chinese brush, you should follow the traditional method of holding it. Held vertically, it is grasped firmly by the finger tips. This makes a pocket in the palm of the hand large enough to hold an egg. The forearm is held above, parallel to the writing table. The writing, or the painting, is done mainly with arm movement and little wrist or finger action.





Beginning calligraphy students learn the basic strokes of Chinese letters. These basic strokes are all contained in the Chinese character for the word **yong**, meaning "eternity." The strokes, as they are added to one another to write **yong**, are illustrated here.

MATERIALS

- writing paper
- ink
- Chinese brush (or a similar long-bristled, pointed brush)

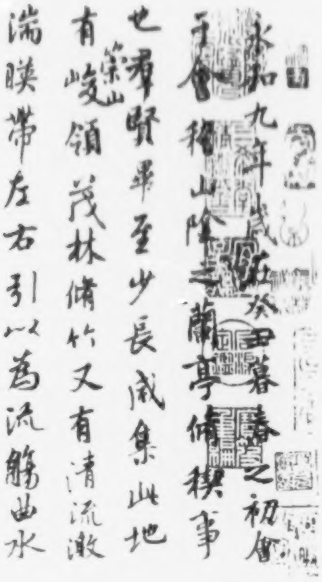
On an ordinary sheet of paper, try writing with the Chinese brush in the position described. For practice, try to write the Chinese character for **yong**, using the basic strokes in the order shown.

A MASTER OF CALLIGRAPHY

Wang Xizhi (307-365 A.D.) was one of the masters of calligraphy in China. Wang Xizhi occupied an official position until he gave it up in 353, spending the last decade of his life in retirement with his literary circle of friends, discussing Buddhist and Daoist topics and cultivating the arts. These connections with religious circles may have been seen later as instrumental in the development of spiritual or personal qualities in his writing. Wang Xizhi's writing included calligraphy in standard, running and cursive scripts, and he is praised for having been proficient in each. His calligraphic works vary in length from several hundred characters to a few tens of characters in short letters. His most noted works are the **Lanting xu** (Preface written at the Orchid Pavilion).

The **Lanting xu** describes a gathering of scholar-officials at which, as was customary, each guest composed a poem, and Wang Xizhi then wrote this lyrical text as the preface for the poems:

> That day the sky was cloudless; the wind blew softly where we sat. Above us stretched in its hugeness the vault and compass of the World; around us crowded in green newness the myriad tribes of Spring. Here chimed around us every music that can soothe the ear; was spread before us every color that can delight the eye. Yet we were sad.



永和九年歲在癸丑暮春之初會
于會稽山陰之蘭亭脩禊事
也群賢畢至少長咸集此地
有崇山峻領茂林脩竹又有清流激
湍暎帶左右引以為流觴曲水

Attributed to Wang Xizhi (307-365A.D.), **Lanting xu** (Preface written at the Orchid Pavilion) in running script, detail of beginning section. The **Lanting xu** is one of the most celebrated pieces of calligraphy in China and set a standard for centuries afterwards.

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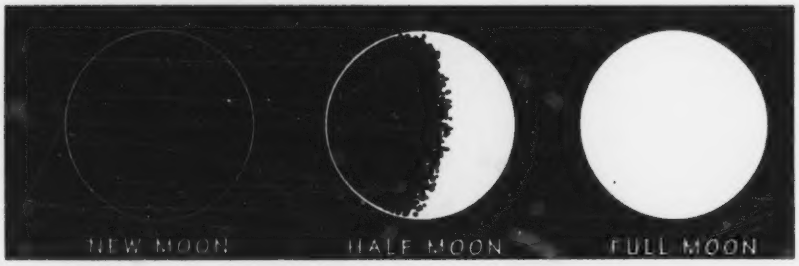
MOON CALENDAR

Help children learn more about the lunar calendar, upon which the Chinese year is based. Explain that before clocks and watches were invented, people had to rely on the sun, moon, and stars to know what time of day, what month, and what year it was. They knew one month had passed when the moon went from looking like a tiny sliver in the sky, to a half moon, to a full moon, and back to a sliver again.

If possible, have children look outside at night to see what the moon looks like. Ask them to draw a picture of the moon one night a week for one month. Have them describe how the shape of the moon seems to change during that period of time.



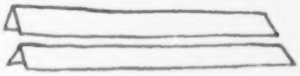
FOLDED PAPER "DRAGON TAIL"
Chinese New Year Symbol

No Chinese New Year celebration is complete without a dragon — or at least part of a dragon! Traditionally the emblem of Chinese emperors, the dragon is considered to be the most sacred animal. It is a symbol of strength and goodness. In China the dragon appears once a year to wish everyone peace, prosperity, and good luck. Make these folded paper dragon tails part of your classroom preparations for the Chinese New Year. Hang them from the ceiling or in doorways as decorations. Or, add some bouncy movement to your parade.

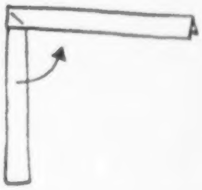
MATERIALS

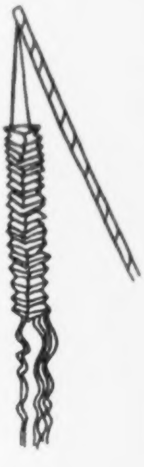
- Wrapping paper
- Glue or stapler
- Ribbon or crepe paper
- string

DIRECTIONS



1. Cut a 3" x 24" strip of two different wrapping papers.
2. Fold each strip in half lengthwise.
3. Glue or staple strips together at one end to form a 90-degree angle.
4. Alternately fold one strip over the other until you come to the end of both strips. Secure the end as before with glue or staple.
5. Cut yarn, ribbon, or crepe paper fringe and attach to bottom.
6. Tape a 12" piece of string to the top for hanging.
7. For variety, vary the lengths and widths of the papers, and try different pattern combinations.





HOW TO PLAY "CATCH THE DRAGON'S TAIL"

MATERIALS

- red bandanna or red crepe paper

DIRECTIONS

1. Eight children form a line placing hands on one another's waists.
2. Name the first person the dragon's head.
3. Name the last person the dragon's tail. A bandanna or piece of red crepe paper in the last person's back pocket may be the dragon's tail.
4. The dragon's head maneuvers and makes the line weave about as it tries to grab the tail.
5. The rest of the players in the line maneuver to keep the head from catching the tail.
6. The same person remains the head if she/he catches the tail.
7. As soon as anyone lets go of the waist of the person in front, the dragon dies, and the next person in line is the head of a new dragon.
8. Continue until everyone has had a turn being the head or the tail.

SECTION II: CUSTOMS AND TRADITIONS

THE CHINESE NEW YEAR

The Chinese New Year falls on the first day of the new moon (between January 21 and February 20). On this day, the Chinese give thanks for the safe and happy year just ended, and they wish each other another good year. The Chinese people refer to the celebration of the Chinese New Year as "passing the year," since they have to get past the monster called "Nian" (year).

According to a Chinese legend, the monster lived in a deep forest in the northern part of China. Every year, on the eve of the Chinese New Year, it would always come out of the forest, looking for food in the villages where people lived. To avoid being eaten, the villagers would prepare several days' food well before the New Year. On the night before the arrival of the monster, they would seal their doors with red strips of paper, build small fires out of bamboo, and stay inside the house. The next day, Nian was scared away by the noise and heat made by the fires. Everyone was very happy to have "passed the year." When people came out of their homes, they congratulated each other on their good fortune. That was the beginning of the Chinese New Year's celebration.

According to traditional Chinese customs, great preparation begins as New Year's Day approaches. Families clean their homes thoroughly, especially the kitchens. Legend has it that the Kitchen God returns to heaven at the end of each year to report on the family. It is hoped that he will report only good things. In addition to offering wine and malt candy, paper money is burned to assure him a comfortable journey. Since there is no cooking during the holiday, women prepare food in advance for the many visitors expected on New Year's Day. The Chinese also decorate their homes with flowers and with a "money tree." A bright red scroll expressing good wishes for the New Year hangs on the door.

On New Year's Eve, families gather for a big feast, which consists of an even number of courses that include dishes made from chicken, pork, beef, vegetables, fish, etc. Before everyone can enjoy the feast, offerings are made to the ancestors while red candles and incense burn on their altar. At midnight, everyone wishes each other "Xin Nian Kuai Le" (**Happy New Year in Mandarin**) or "Gung Hay Fat Choy" (**Happy New Year in Cantonese**). Younger members of the family perform a ceremonial bow called **"Ke Tou"** to congratulate their elders, who in turn give out lucky money and set off firecrackers to chase the old spirits away. Everyone stays up late, believing that doing so brings longer life to parents.

On New Year's Day, children receive special attention. They wear new clothes, play games, eat sweets, and receive lucky money from parents and married uncles and aunts. The money is wrapped in a red envelope called **"Hon-Bau"** in Mandarin or **"Lai See"** in Cantonese since the color red symbolizes everything positive to Chinese people: grandeur, dignity, royalty, youth, beauty, courage, joy, etc. The family eats a special New Year's lunch, which is supposed to bring good fortune throughout the year. Afterwards, everyone may visit relatives and friends. During the visits they eat candied melon, fruit, and boiled dumplings. It is also customary to exchange large, red greetings cards, oranges and tangerines among friends.

Over the next few days, the New Year's celebration moves outdoors. Firecrackers explode, as drums and cymbals lend their beat to the Dragon and Lion Dance. Lions are believed to have power to repel evil and bring good fortune, and dragons symbolize strength and goodness.

According to Chinese customs, there is a long list of do's and don'ts. Nothing should be broken during the festive season since the **"breaking"** of articles will result in the **"breaking up"** of marital or family unity. The family also hides brooms, knives and any sharp objects, believing that using them on New Year's Day will bring bad luck. In addition, housewives must not wash the floors or clothes; even rubbish is not to be disposed of until the fifth day of the lunar year lest wealth, too, be "washed" or "thrown away."

On the first full moon, the New Year's celebration ends with the great Festival of Lanterns. During this celebration people exchange lanterns and join in a huge parade. At the head of the parade is an enormous dragon. It is called Golden Dragon, and according to custom it only wakes up during the New Year's Day. That's why excited spectators often throw firecrackers in the dragon's path to make sure he stays awake! The Golden Dragon can be stretched to more than one hundred feet long, and a total of three relay teams of twenty-two classical dancers are involved.

In the United States, the celebration of the Chinese New Year takes place in New York City, San Francisco, Los Angeles and other U.S. cities with a large Chinese-American community. The Festivities may last several days and include traditional opera, dancing and musical performances, cooking exhibits, a Miss Chinatown beauty contest, and of course, a gigantic New Year's Day Parade.

THE NEW YEAR CELEBRATION IN CHINATOWN

New York City's Chinatown has grown and spread out over the years and has become more confusing to many casual visitors. Chinatown is now shaped like an amoeba, spreading out in all directions from the original central location of Mott and Bayard Streets. Thus, to bring a group of youngsters or students represents a challenge. With some prudent planning, a group outing during the Lunar Year holiday period can be exciting, with a minimum of confusion.

Sometime after 11:00 p.m., a number of fraternal associations send out a ferocious animal: either a lion or dragon to greet the New Year at 12 midnight. Ferocious animals along with exploding firecrackers help to ward off the monster "Nian" (which means "year" in Chinese) who usually arrives at this time. Along with the lions and dragons are musicians who clang on cymbals and drums. Graceful dancers manipulate the large animals. Usually, only the strong of heart are out at this time because the weather in NYC is often extremely frosty and the streets are often icy and snow-lined. So, bundle up if you wish to see the animals bobbing along Mott Street, the Bowery, or East Broadway.

For more vivid attractions, a visit during New Year's Day would be memorable. By noon, all the streets of Chinatown will be jam packed. Numerous colorful parades will be winding through the narrow streets. The accompanying music and firecrackers can be heard from far away. The lions and dragons pause in front of stores and businesses. A head of lettuce and a red envelope with lucky money dangle on a string from high above.

After dancing a sufficient period of time, the lettuce and envelope are lowered and given to the animal. According to legend, the dragon draws its strength from a pearl and is constantly pursuing the Pearl of Potentiality, represented by the lettuce (literally "life-vegetable"). Many of the parades substitute a lion for a dragon, because a dragon is so long and as many as 100 men would be needed to carry some large dragons. The streets are lined with wrapping paper and debris from the firecrackers. By the end of the day, Chinatown appears to be quieter.

PAPER LANTERNS

Making cloth and paper lanterns is a very old craft in China, dating from as far back as the Han Dynasty in the first century A.D. Lantern-making was probably exported to Japan along with many other Chinese skills and traditions during the following centuries.

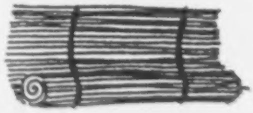
Lanterns are used in two major holidays in Chinese culture: the Lantern Festival and the Moon Festival.

The Lantern Festival is the second major holiday of the New Year and is celebrated especially in northern China. It comes on the 15th of the First Month, which is the first full moon of the year. People make elaborate lanterns out of paper or silk, which are often decorated with paintings of traditional heroes or famous scenes from history. In the evening, the lanterns are paraded, and the best ones are chosen. People also have parties, make poetry, and guess riddles. Special lanterns are made with riddles written on them.

The lanterns used for the Moon Festival are usually in fantasy shapes, such as animals, fruit, or flowers. They are often made of silk stretched over complicated bamboo frames.

MATERIALS FOR THE FRAMES

- Matchstick bamboo, several feet long - (buy one of those cheap matchstick blinds in Chinatown. Cut the strings and take it apart as you need it.) or uninsulated iron wire, #16 or 18 or stiff basketweaving material.
- ¼ inch masking tape, or other tape or string for holding the sticks together.
- pliers with wire cutters, if you use wire.



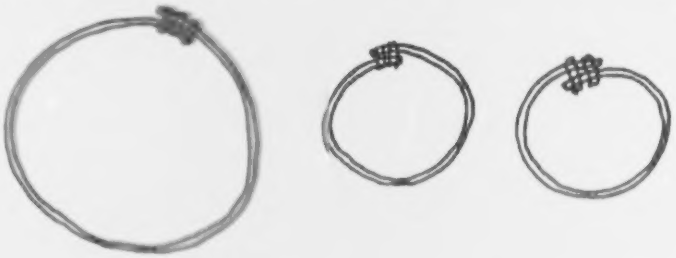
MATERIALS FOR THE COVERINGS

- Paper napkins, crepe paper or thin cloth. (Paper napkins work best. Get all the colors except white. White is the traditional Chinese mourning color; white lanterns are used at funerals and other occasions when spirits are present - **NEVER** at a celebration. Paper napkins are good because the dye doesn't run; they are stretchy and strong and will resist children's clutchy fingers.)
- Small bottles of Elmer's glue with functioning tops or small cans of rubber cement (with brush).

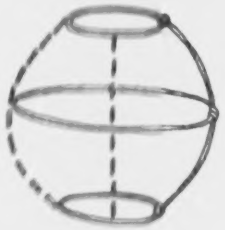
- scissors.

MAKE A FRAME

- Make 3 circles - one large and 2 small. Overlap the ends and tape them firmly.

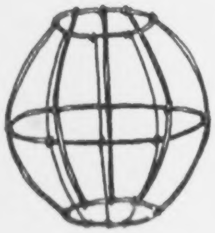


- Cut 8 sticks the diameter of the big circle.
- Start assembling them. At each intersection and end, use a short piece of tape. Wrap the tape around both sticks.



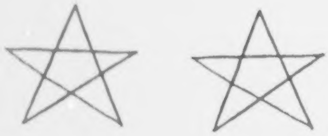
And so on, until you have -

like the lines on a globe

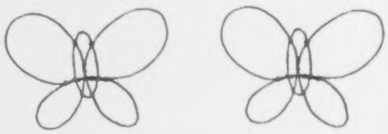


Or - you can make two of the same shape out of sticks

Try to make them identical in size and shape.



Then cut a lot of little sticks about 4 inches long.



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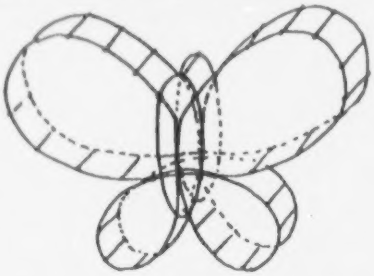
- Join the front and back together with the 4 inch sticks. Use enough to make it feel strong and so that you have one wherever you may want to stop the paper and change colors.



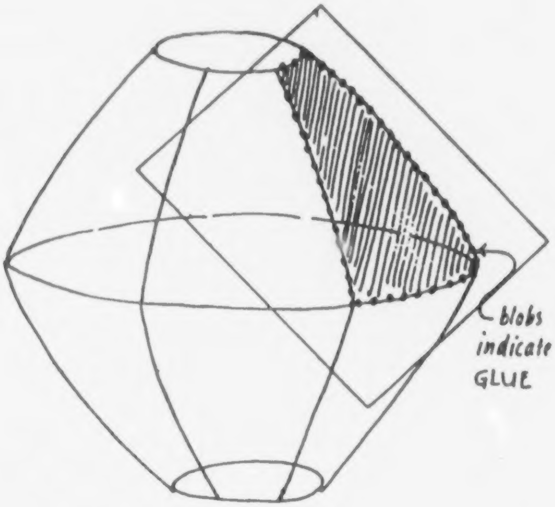
- You end up with a flat-sided, 3-dimensional shape.

COVERING

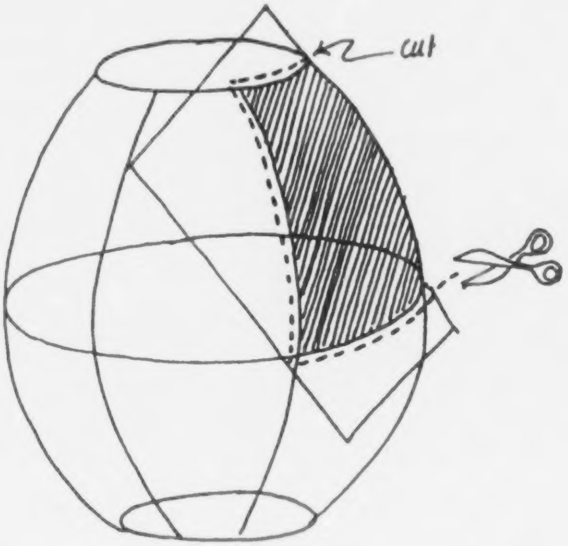
- To cover the lanterns, you need to have a light touch. Any section on a frame may be covered independently, or you may use the same piece of paper until it runs out or the curves of the lantern start to make it wrinkle hopelessly.

- The spherical lanterns must be covered in sections.

- Coat the sticks around the edges of an opening with glue. Lay the napkin gently over it. (Start right in the middle of a napkin - not at an edge.) Smooth it down onto the sticks. It will stick almost immediately.



- Start the next sheet by putting glue on all the appropriate sticks. Glue right over the edge of the first sheet of paper.



- A spherical lantern could have different colors in different sections, like a beach ball, or top and bottom different, etc.

- The only tricky part is: when you trim off the excess paper at any one stick where two sheets overlap, you have to be careful not to puncture the first sheet with the scissors.

- The lanterns made of two of the same flat shape are the easiest to cover.

- One sheet of paper will cover the whole front, and one will do the back unless you want to change colors.

- A strip about the same width as the short sticks (or a little wider) will do the edges.

CHINESE NEW YEAR PUZZLE

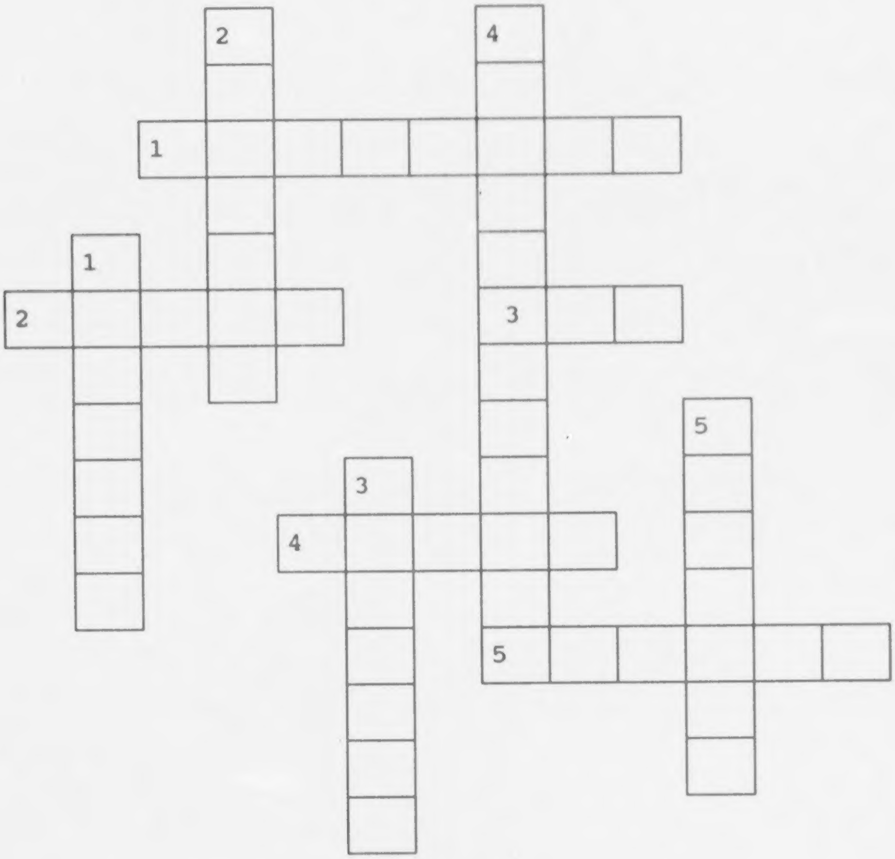
Use these clues to fill in the crossword puzzle below:

ACROSS

1. The Chinese New Year celebration ends with the great Festival of ______________.
2. ________________________ are believed to have power to repel evil.
3. ______________________ is the color used to celebrate the Chinese New Year.
4. The Chinese decorate their homes with a ____________ tree at the New Year.
5. A bright red _____________ expressing good wishes for the New Year hangs on the door.

DOWN

1. Legend has it that the __________ God returns to heaven at the end of each year to report on the family.
2. ________________________________ symbolize strength and goodness.
3. The family eats a special New Year lunch, which is supposed to bring good _______ ______ throughout the year.
4. _________________ wake up the sleepy Golden Dragon.
5. According to Chinese ________________, there is a long list of do's and don'ts.



CHINESE NEW YEAR PUZZLE (ANSWER KEY)

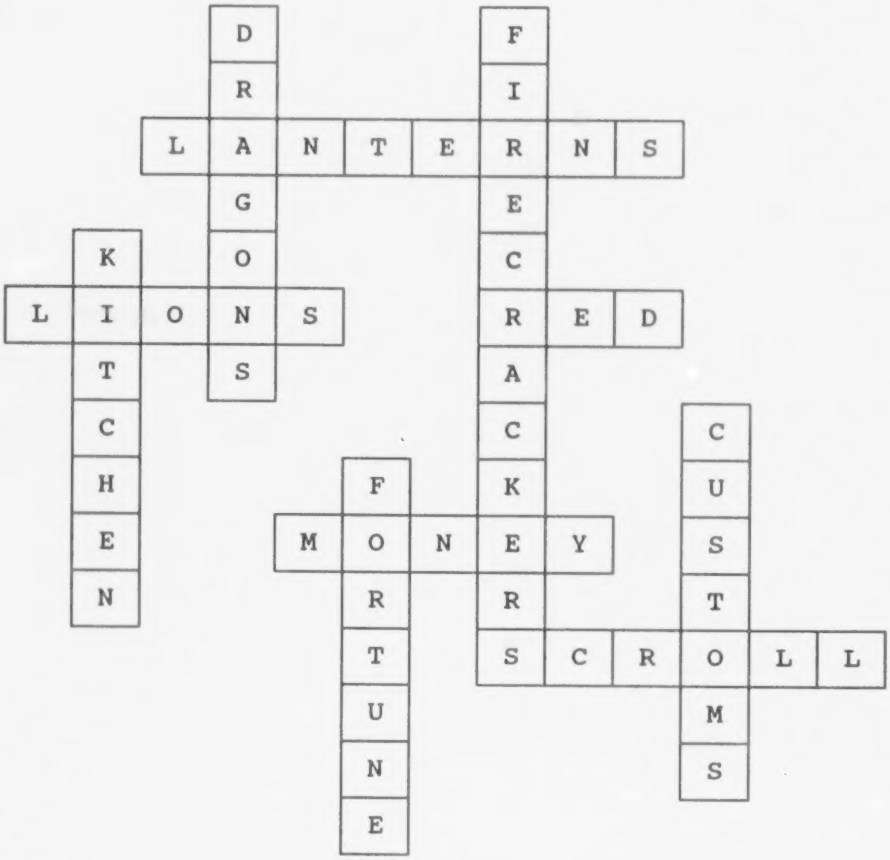
Use these clues to fill in the crossword puzzle below:

ACROSS

1. The Chinese New Year celebration ends with the great Festival of lanterns.
2. Lions are believed to have power to repel evil.
3. Red is the color used to celebrate the Chinese New Year.
4. The Chinese decorate their homes with a money tree at the New Year.
5. A bright red scroll expressing good wishes for the New Year hangs on the door.

DOWN

1. Legend has it that the Kitchen God returns to heaven at the end of each year to report on the family.
2. Dragons symbolize strength and goodness.
3. The family eats a special New Year lunch, which is supposed to bring good fortune throughout the year.
4. Firecrackers wake up the sleepy Golden Dragon.
5. According to Chinese customs, there is a long list of do's and don'ts.



BOILED MEAT DUMPLINGS

Dumplings are one of the most popular appetizers for Chinese during the Chinese New Year because the shape of a dumpling is just like a gold or silver ingot which was used as money in ancient China. Therefore, it is said that dumplings bring prosperity and good fortune.

INGREDIENTS

- 2½ cups wheat flour (all purpose)
- 1¼ teaspoons salt
- 1 cup cold water
- ¾ lb. pork or beef (ground)
- ¾ lb. Chinese cabbage (or spinach)
- 2 tablespoons chopped green onion
- 1 teaspoon chopped ginger
- 2 teaspoons soysauce
- 1 teaspoon salt
- 1 tablespoon sesame oil

DIRECTIONS

1. Place flour in bowl. Add salt and water slowly. Mix by fingers and knead to form a soft dough; cover with damp cloth. Let it stand for at least 15 minutes.

2. Mix meat, green onion, ginger, soysauce, salt, and sesame oil in a bowl, then add chopped cabbage (sprinkle a little salt on chopped cabbage first, then squeeze dry). Mix thoroughly to make filling.

3. Remove the dough to lightly floured board, knead again until very smooth. Divide the dough into 40 pieces. Flatten each piece by hand and roll into a round thin pancake (about 2 ½ inch diameter); the center should be thicker than the edge. Place half a tablespoon of filling in center, fold over and pinch in center. Hold in your hand, grasp edge between thumb and index finger to seal, repeat other half with other hand and press up slightly toward center.

4. Boil 10 cups of water in a deep pan and drop dumplings one by one into boiling water (each time drop about 20 dumplings). Stir carefully with a large spoon to prevent sticking to the bottom of the pan and cover with a lid. Cook about ½ minute until water boils up again.

5. Add ⅔ cup of cold water to the pan, cover and let come to a boil one more time. Add another ⅔ cup of cold water; when it boils again, the dumplings will be done. Remove the dumplings with a slotted spoon to a plate. Serve hot. In small individual bowls place some soysauce, vinegar, red pepper oil or mashed garlic, dip the dumpling into the mixture and eat.

IT'S NEW YEAR

It's New Year. It's New Year.
Put on my new clothes and my new hat.
Say "Good morning" to Mom and Dad.
Wish Mom and Dad a happy New Year.

THE NEW YEAR'S DAY

Wang An Shi

In the noise of firecrackers
 a year has passed.
The warmth brought by the spring
 breeze has melted in Tu Su Wine.
When the rising sun begins to shine,
 all families replace old peach charms
With new ones to welcome
 the New Year.

MORE SUGGESTED ACTIVITIES

LANGUAGE/CULTURE

- Write a personal story about the Chinese New Year celebration based on your experience.
- Invite a family or community member to visit the classroom and ask him/her to teach Chinese calligraphy.
- Draw an illustration on construction paper of how you think the Kitchen God looks.
- Write a story about what you feel the Kitchen God would report about your class and school, and use the illustration as a cover to your book.
- What are some of the traditional customs of the Chinese New Year? Share the information with your classmates.

SOCIAL STUDIES

- Discuss the following questions in class:
    - When is the Chinese New Year?
    - How do people prepare for the Chinese New Year?
    - What happens on the Chinese New Year's Day?
    - How long does the Chinese New Year last?
- Compare and contrast the festivities for the Chinese and American New Year.
- Identify other cultures that may also have some do's and don'ts for the New Year.
- Report to class your role in helping your family prepare for the New Year.
- Discuss the differences between the Chinese New Year Celebration in the United States and abroad.

- Report the New Year's festivities of the country from which you came.

- Interview the Chinese residents in the community to find out their contributions to the community.

- Ask your parents to take you to cultural institutions to enjoy Chinese cultural activities. (See suggested cultural activity listing.)

- Invite family or community members to visit the classroom and ask them to discuss themes in Chinese culture, e.g., education in China, Chinese customs, Chinese students' relationships with their parents and teachers, etc.

SCIENCE

- Plant some flower seeds, take care of them, and observe their growth. Count seeds at planning time and figure out the percent of germination. Make a graph to record the plant growth. Also, compare temperatures: in the shade vs. in direct sunlight; nine o'clock in the morning, twelve o'clock noon, three o'clock in the afternoon. When the flowers bloom, use them to decorate your home.

- What environmental changes are there in the spring in New York City?

- Describe the weather at this time of year.

MATHEMATICS

- Group Work: Get a grocery flier, some play-money (both paper and coins) and some food items from your teacher. Use ten dollars to buy as many healthy items as you can for the Chinese New Year. Each group pays a grocer and should practice making change. Then share your purchases with the rest of the class.

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MATHEMATICS

- Group Work: Get a package of colored candies from your teacher. Open the package and put the candy on your desk.

* **DON'T EAT ANY YET!**

- How many candies are in your package? ____________
- How many different colors do you have? ____________

COLOR		NUMBER OF CANDIES
Brown	(B)	________
Red	(R)	________
Orange	(O)	________
Yellow	(Y)	________
Green	(G)	________

- Use your numbers and write these ratios in fraction notation.

a) B to Y ________

b) R to O ________

c) Y to G ________

d) R to B ________

e) R to total ________

f) B to total ________

g) G to (Y + O) ________

h) (B + y) to O ________

i) (O + R) to total ________

j) (B + R + Y) to (R + O + G) ________

*** Now you can eat the candy to celebrate the Chinese New Year!**

SUGGESTED CHINESE CULTURAL ACTIVITIES IN NEW YORK CITY

CULTURAL INSTITUTIONS	COMMENTS
American Museum of Natural History, Central Park West at 79th Street (212) 769-5100	Permanent exhibition on Asian culture and people
Asia Society 725 Park Ave. at 70th Street (212) 288-6400	Films, art exhibitions, book stores and lectures
Asian American Arts Center, 26 Bowery, New York City (212) 233-2154	Arts exhibition and cultural performances
Asian Cinevision 32 East Broadway, New York City (212) 825-8685	Films by Asians and Asian-Americans
Asian American Dance Theater 26 Bowery, NYC. 10013 (212) 233-2154	Cultural performances
Chinese Cultural Center 41-61 Kissena Blvd., Flushing (718) 886-7770	Art gallery, scheduled Chinese cultural classes, and Chinese library
China House at China Institute 125 E. 65th St. New York City (212) 744-8181	Art exhibition, cultural performances
Chinese Information/Cultural Center 1021 Ave. of the Americas (212) 373-1854	Taipei Theater, CICC Art Gallery, lectures
Chatham Square Library East Broadway, NYC (212) 964-6598	Chinese-American films, books and cultural activities for children
Metropolitan Museum of Art Fifth Ave. & 81st St. NYC (212) 570-3932	Chinese/Asian art exhibitions
The New York Chinese Cultural Center 90 West Broadway, NYC 10007 (212) 618-1980	Cultural exhibitions
Pan Asian Repertory 47 Great Jones St. NYC (212) 505-5655	Cultural exhibitions
Queens Festival Flushing Meadows Corona Park (718) 886-5454	Held in spring annually

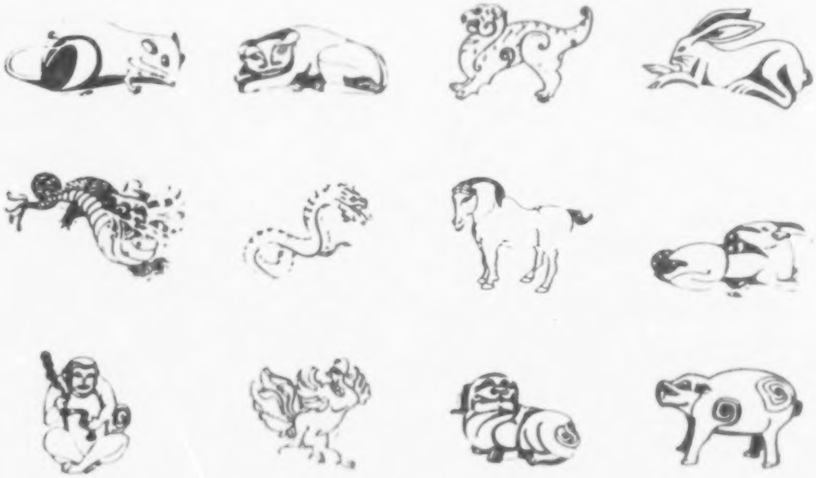
THE CHINESE LUNAR CALENDAR

The Gregorian Calendar is used in most parts of the world including the United States. This calendar follows the cycle of the sun and has 365 days which are divided into twelve months. Each month has 30 or 31 days except for the month of February, which has 28 days (except every fourth year, known as leap year, when it has 29 days).

Although the Chinese Lunar Calendar is an ancient calendar no longer in official use, Chinese festivals still fall on days fixed by the Lunar Calendar. This calendar follows the cycle of the moon and divides the year into twelve months. Each month has 29 or 30 days and begins with the appearance of the new moon. Every 30 months an extra month is added to make the adjustment to solar time.

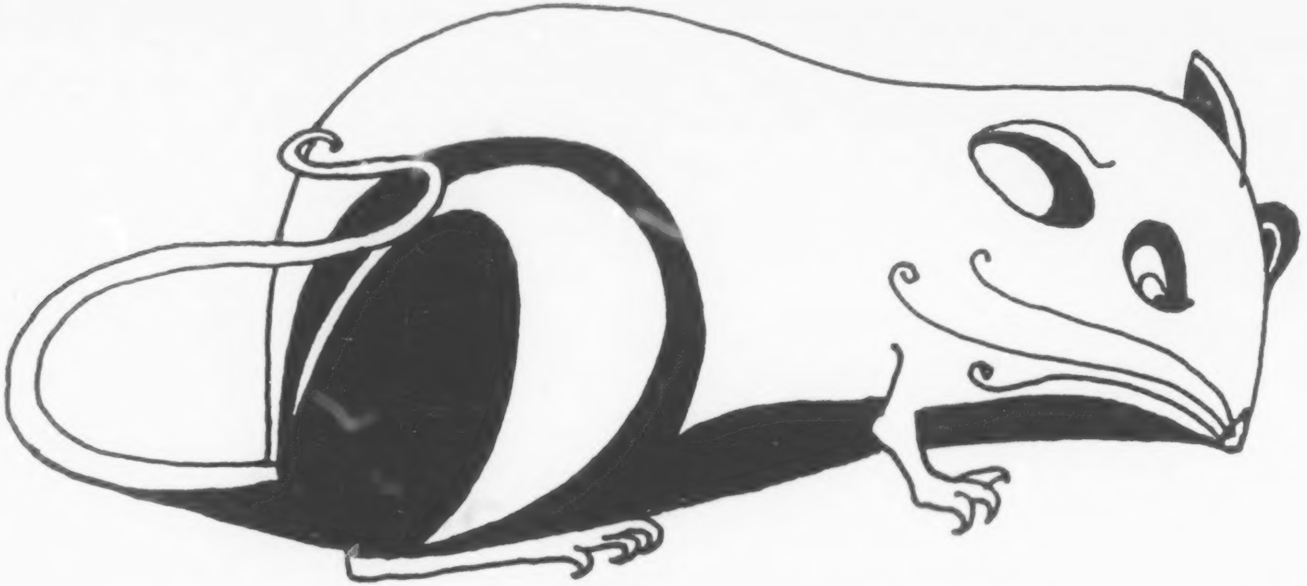
The Chinese Lunar Calendar repeats itself every twelve years. Each year in the twelve year cycle is represented by an animal which serves as a symbol for that particular year. These animals in their sequential order are: rat, ox, tiger, rabbit, dragon, snake, horse, ram, monkey, rooster, dog and pig.

According to legend, the god of Heaven selected these twelve animals through a contest. The first twelve animals to reach the River of Heaven and cross over to the other bank (Heavenly Garden) would represent the years in the Chinese Lunar Calendar. So all kinds of animals started from different places and traveled toward the River of Heaven. When they reached the river in front of the Heavenly Garden, the ox started across without difficulty. The rat jumped on the ox's back, but before the ox could get out of the water, the rat jumped off his back and reached the Heavenly Garden first. So the rat became the first animal represented in the cycle and the ox the second. Then followed the tiger, rabbit, dragon, snake, horse, ram or goat, monkey, rooster or chicken, dog and pig.



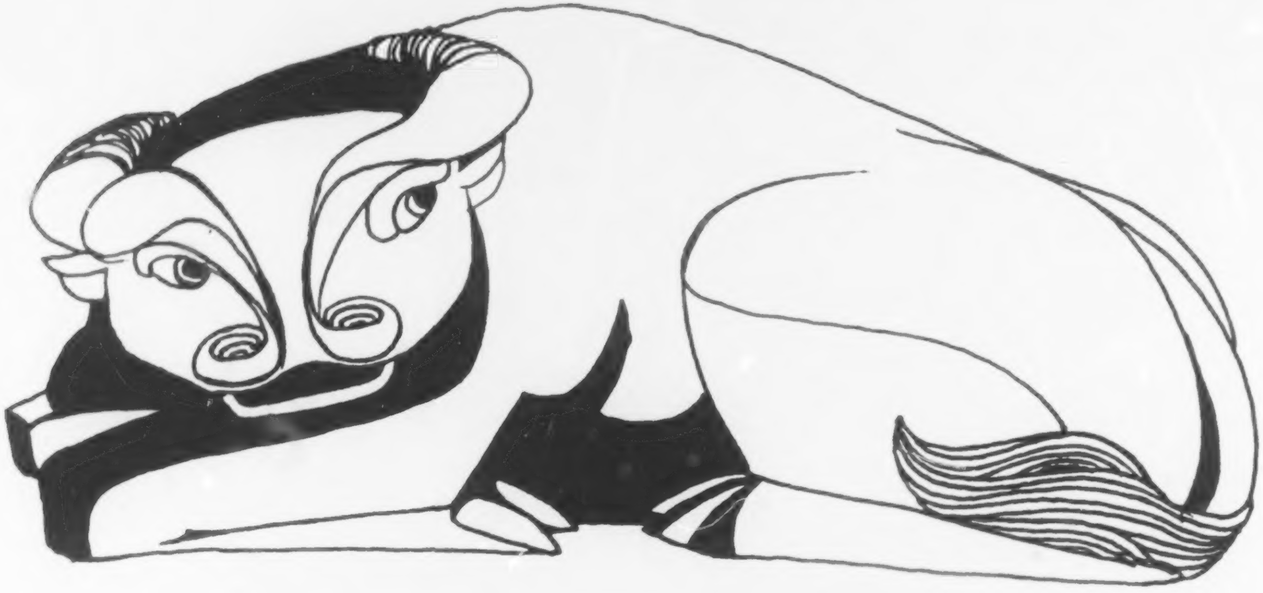
RAT

With slender eyes and a pointed nose,
A little rat is so alert.
He runs east and west,
Looking for food all day long.



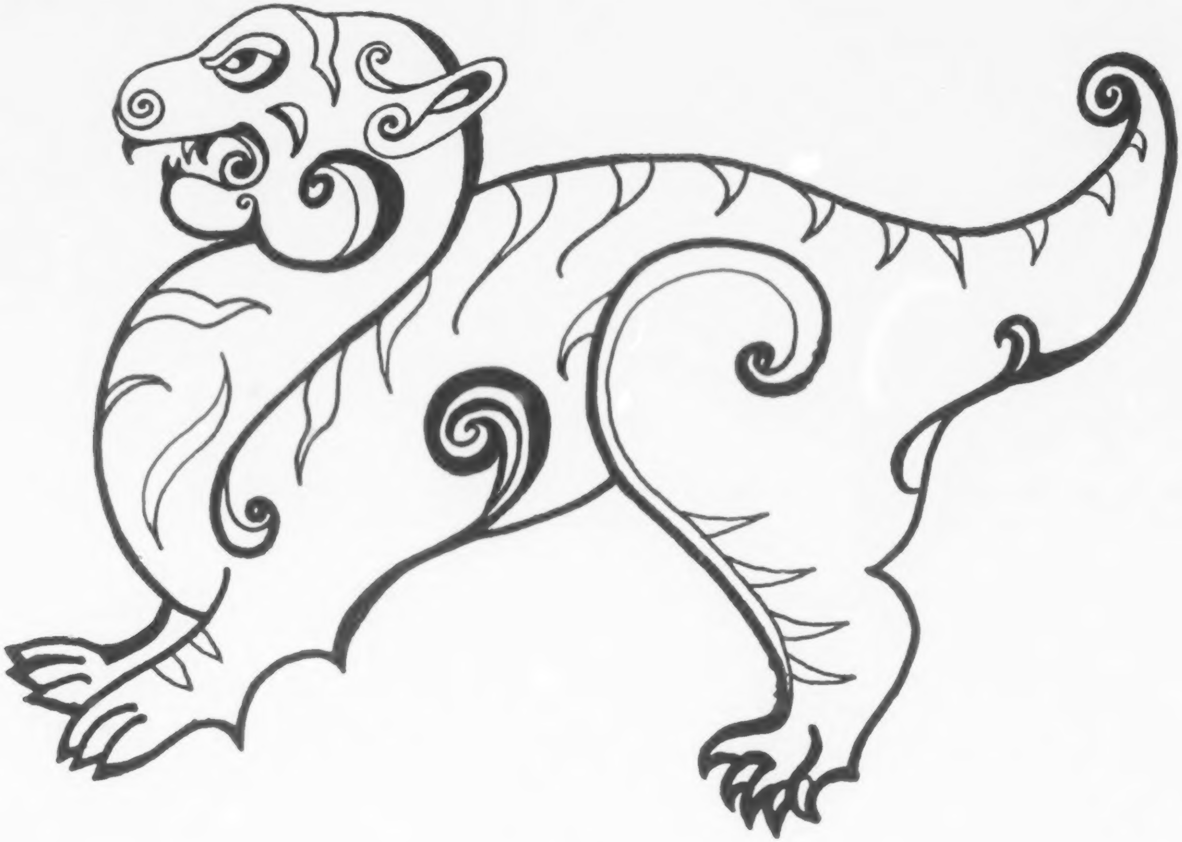
OX

With long and curly horns,
A big ox has a strong body.
He pulls a plow and walks forward,
Helping the farmer plant crops.



TIGER

With courage and loud roars,
A big tiger lives in the jungle.
He runs fast and jumps high.
A lot of animals are afraid of him.



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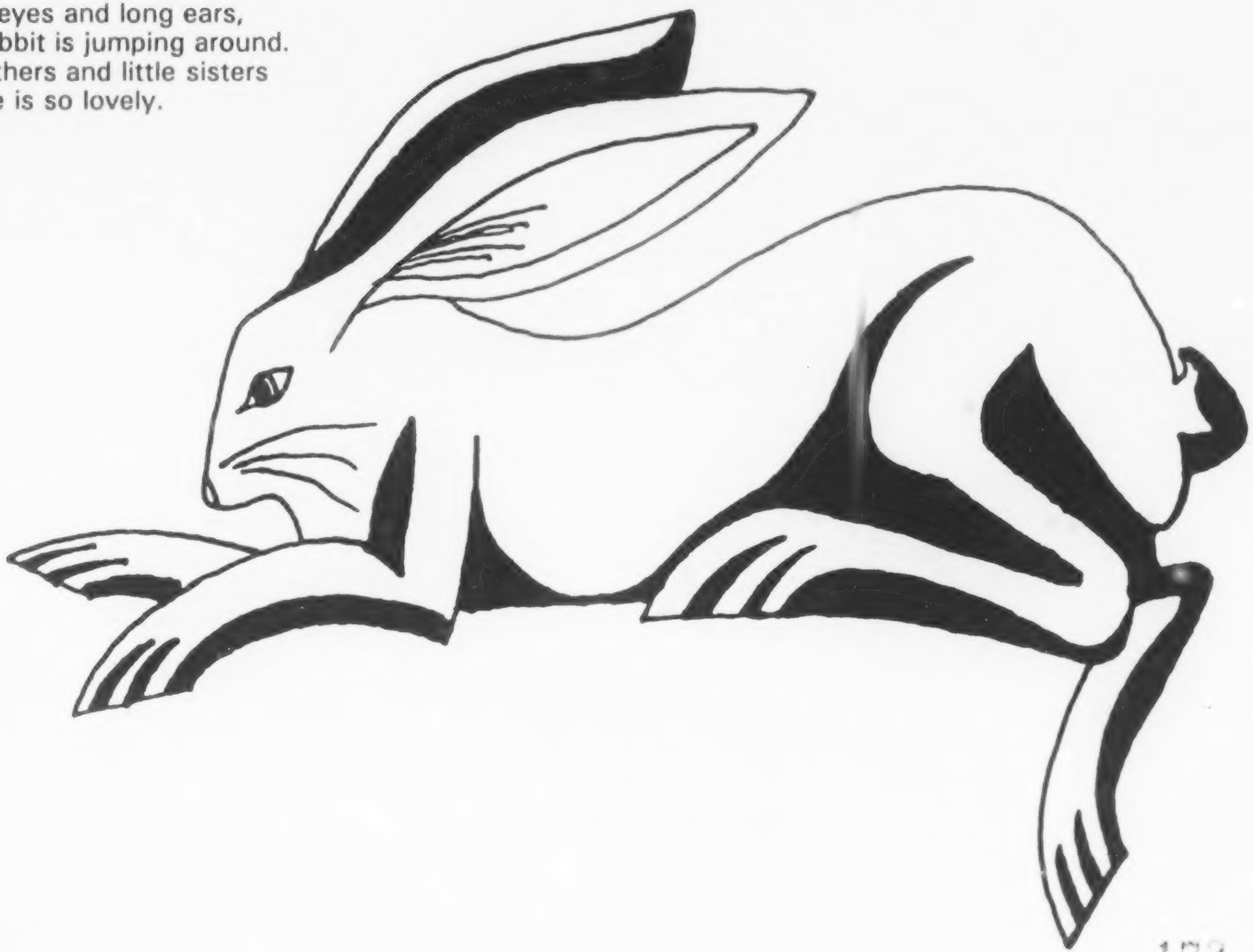
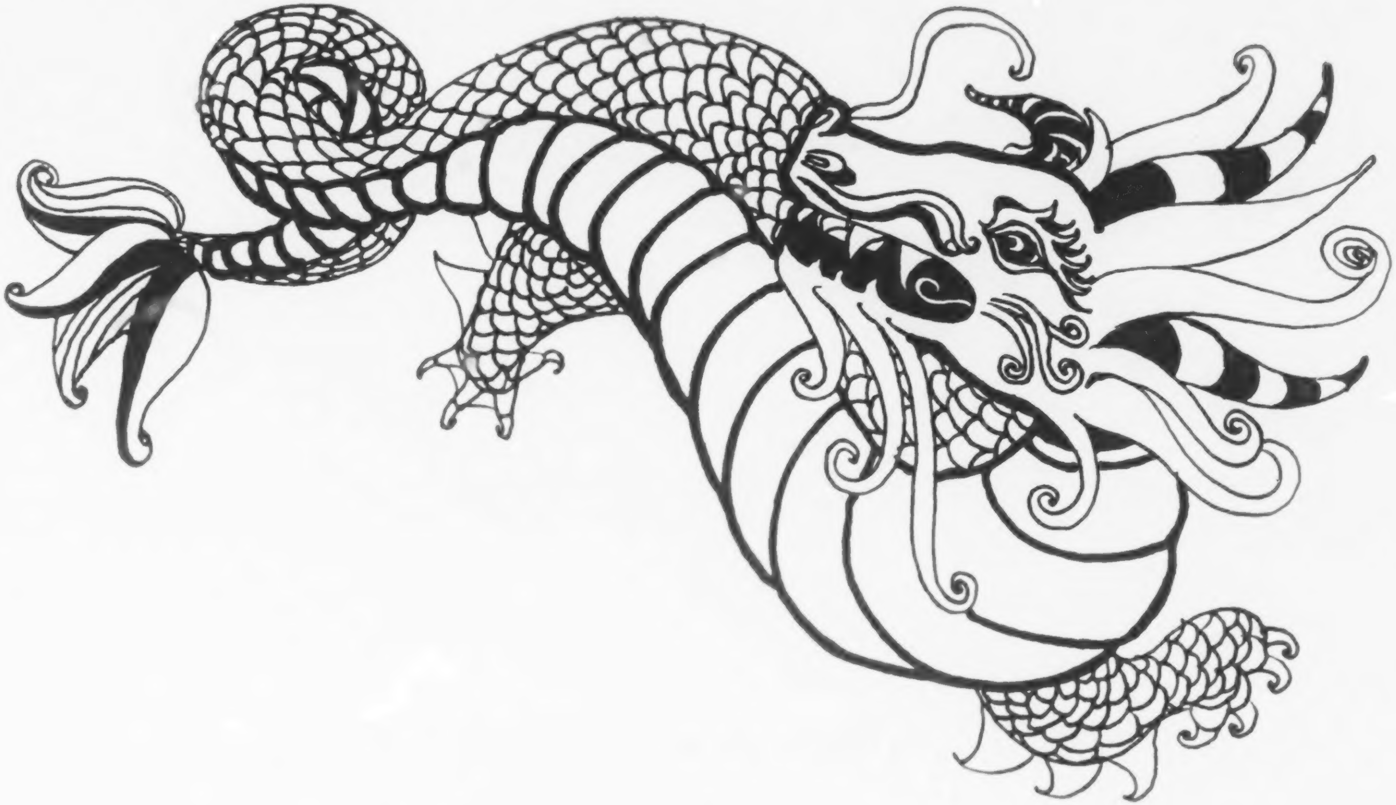
RABBIT

With red eyes and long ears,
A little rabbit is jumping around.
Little brothers and little sisters
All say he is so lovely.



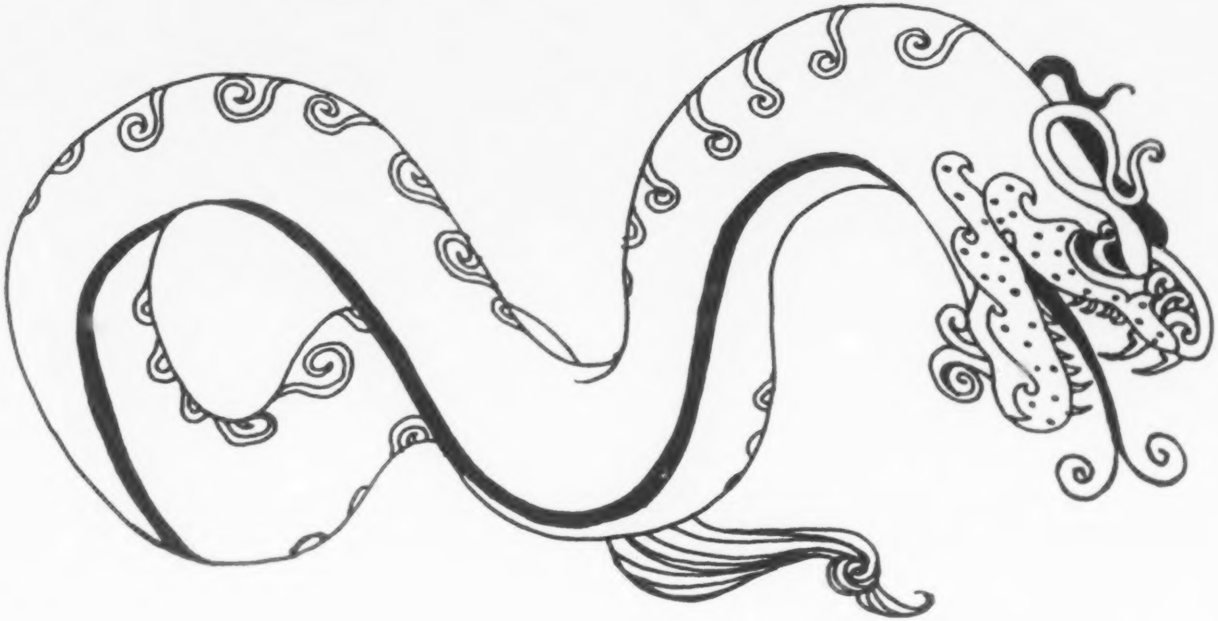
DRAGON

With a beautiful and long body,
A colorful dragon descends from heaven.
He is flying on cloud and fog,
Symbolizing grandeur and dignity.



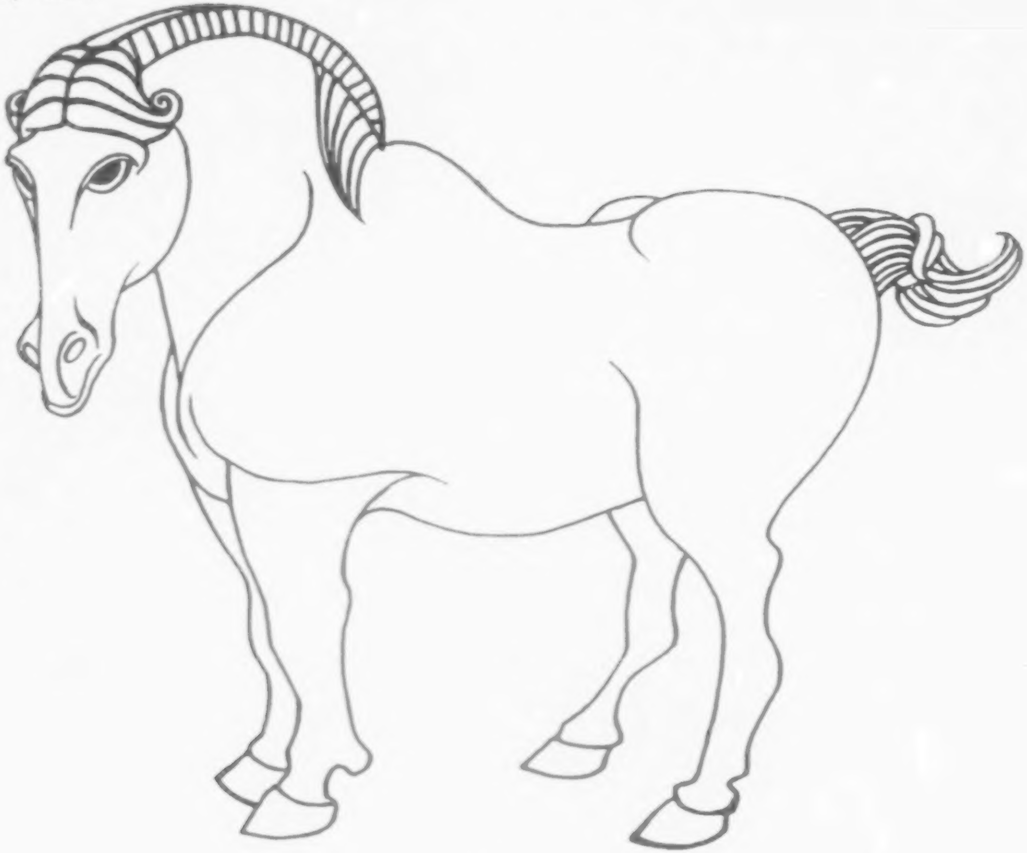
SERPENT

With a slender body,
A serpent is coiling up on a branch.
He sticks out his tongue and wags his tail.
Never, ever can you touch him.



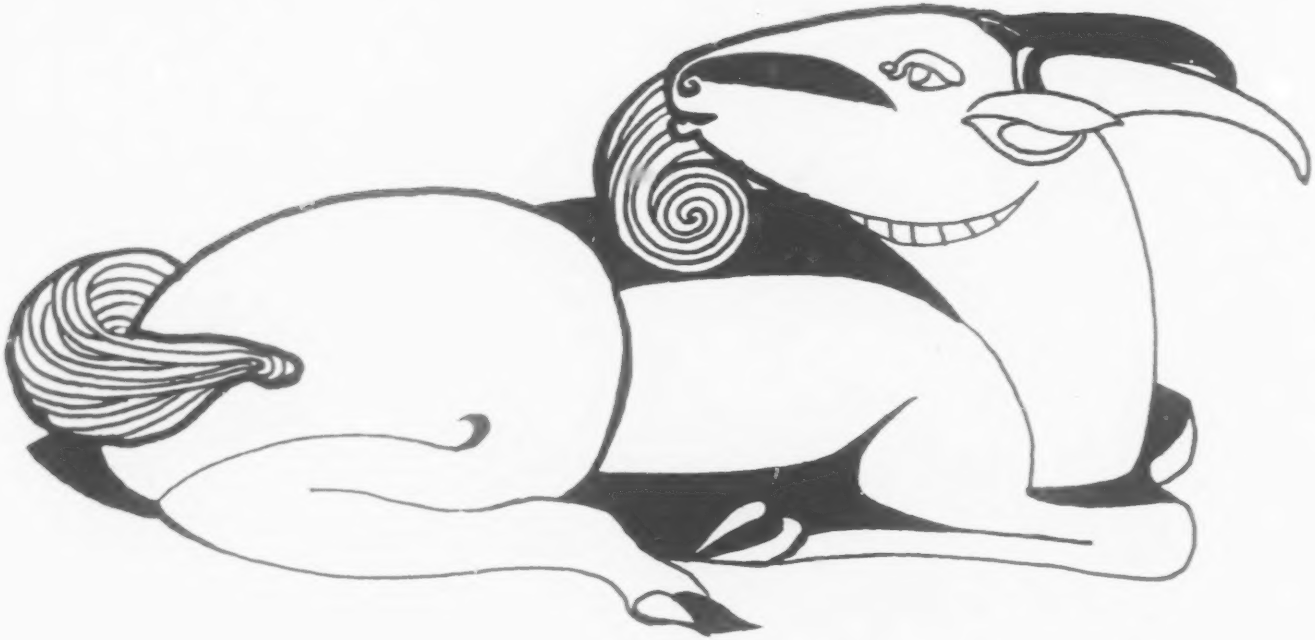
HORSE

I have a little, nice horse.
He can run as well as jump.
By riding him, I take a trip.
My little horse is really nice.



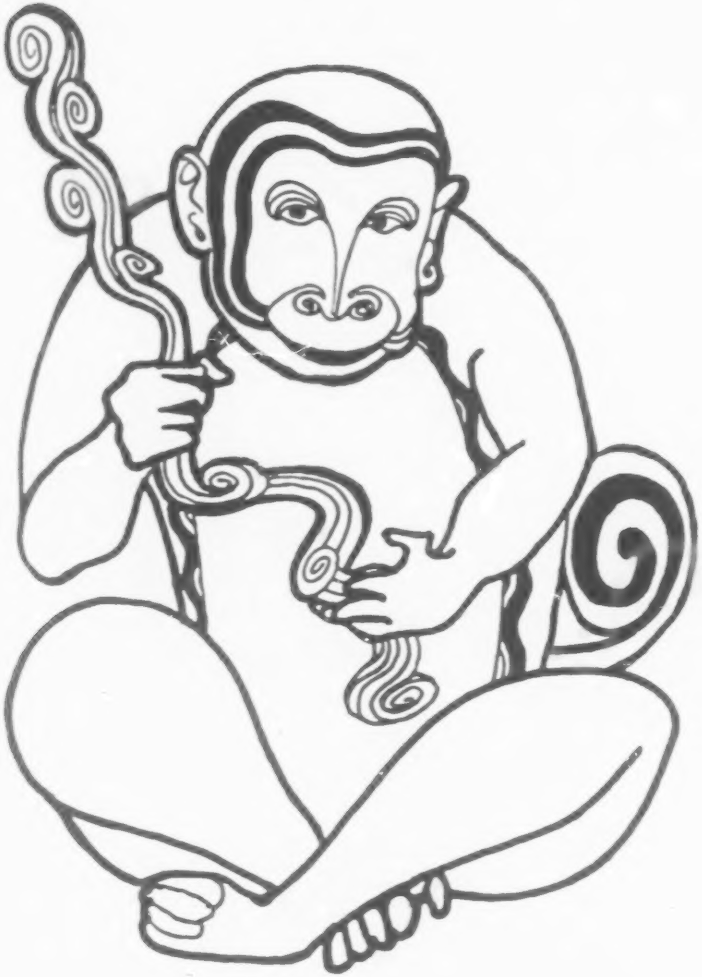
RAM

A little ram is baaing.
He is not afraid because Mom is with him.
Eating some grass and drinking some water,
He lives in a carefree world.



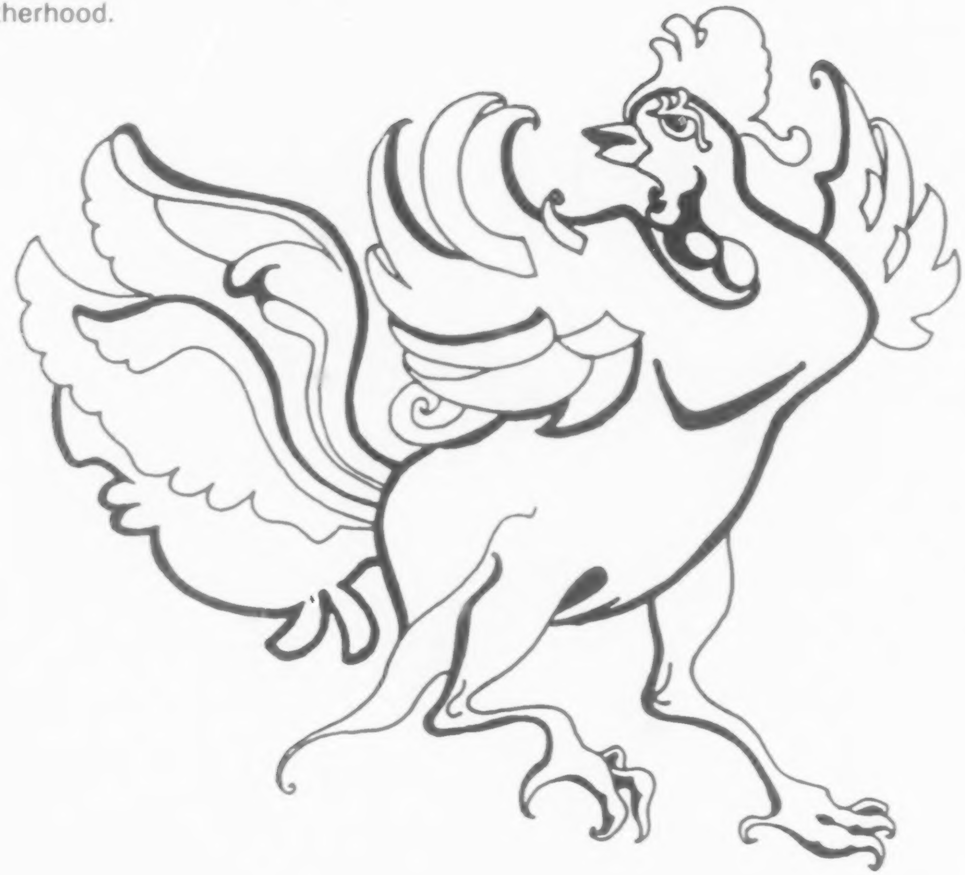
MONKEY

A little monkey is so naughty.
He climbs up and down, never stopping.
He imitates whatever you do
And makes everybody laugh.



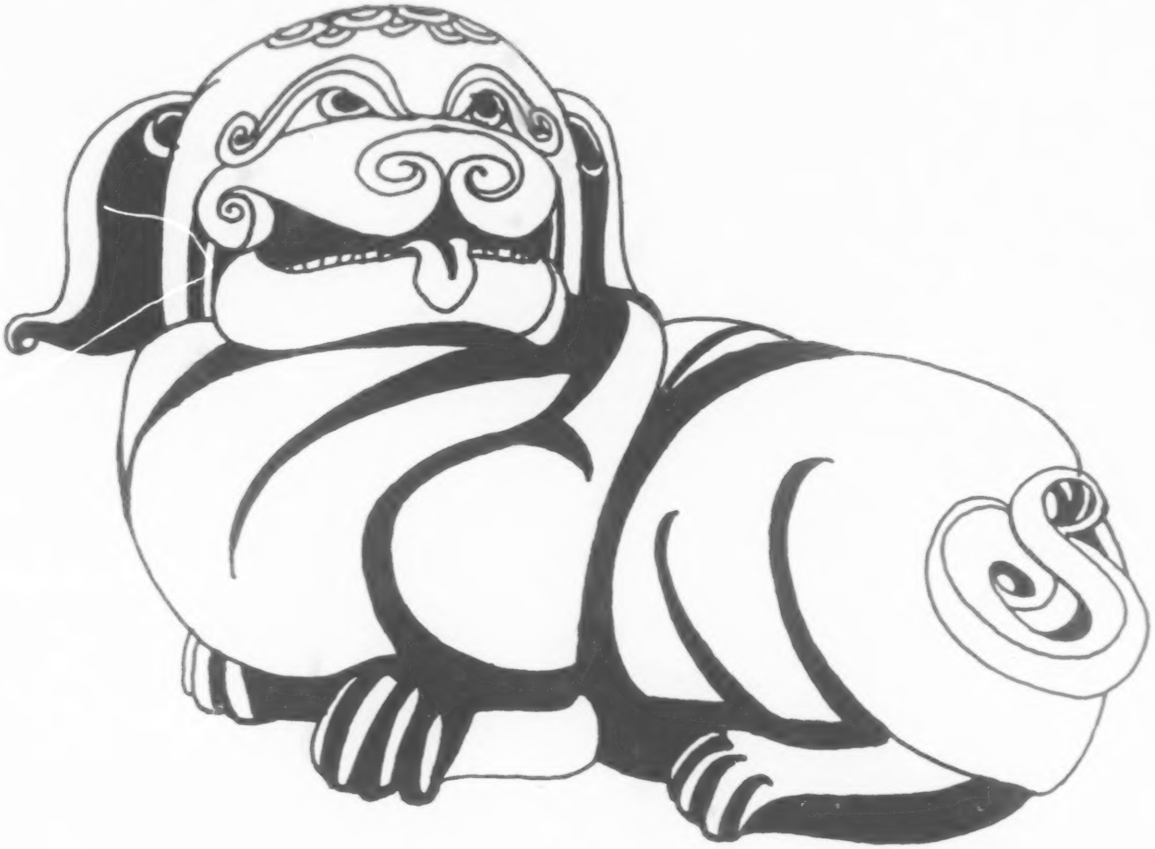
ROOSTER

A rooster crows every morning
And wakes people up.
A hen takes care of her chicks
And shows great motherhood.



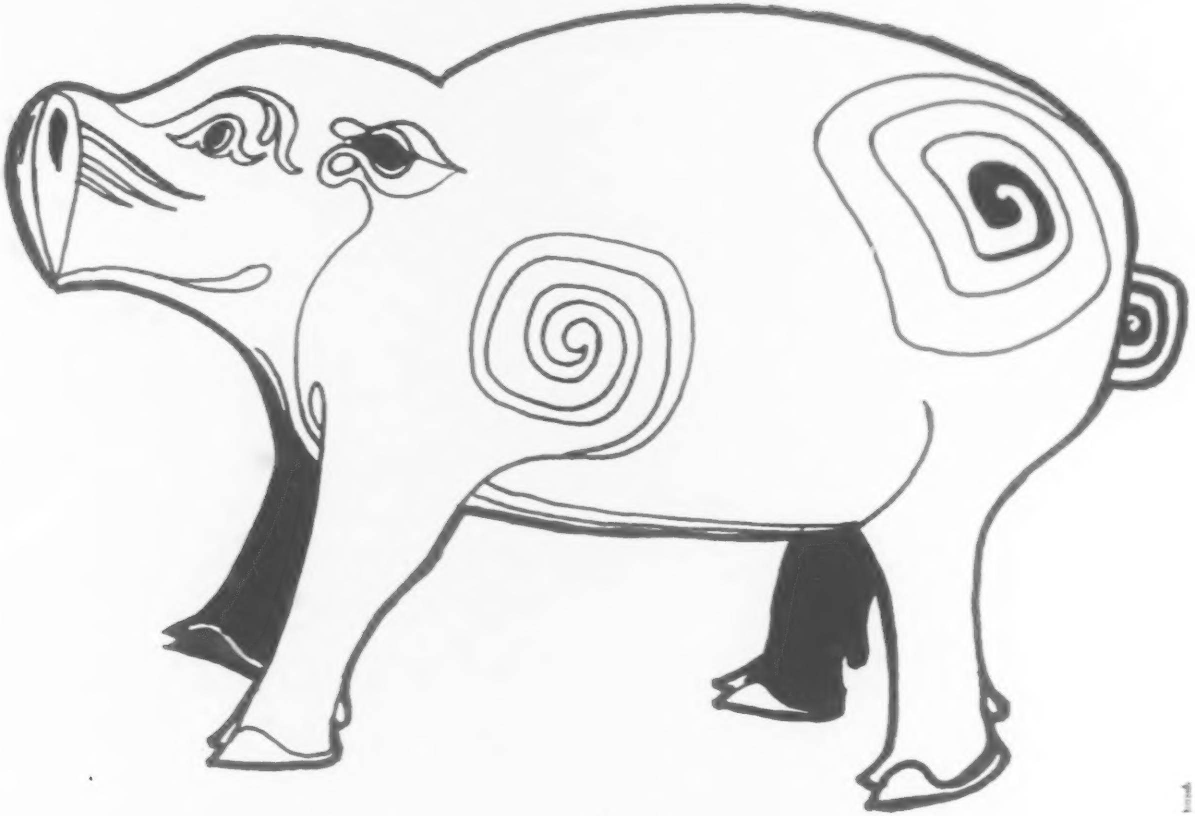
DOG

There is a lovely, little dog.
With big ears and a long tail.
Sitting well at the front door,
He waits for his master to come home.



PIG

While walking, a little, chubby pig wags right and left.
After eating, he sleeps.
After sleeping, he eats.
Everybody says he is lazy.



PLAY THE GAME "HAWK AND CHICKENS"

INTRODUCTION

China is an agricultural country; children in the village work, either watching cattle or feeding poultry to help out the family. In daily life, the cruelty of the hawks and foxes attacking chickens and the affection of motherly love demonstrated by the hens to protect their chickens provide real stories of survival for young children and also remind them of how great motherly love is.

NUMBER OF PLAYERS RECOMMENDED

Ten to Fifteen

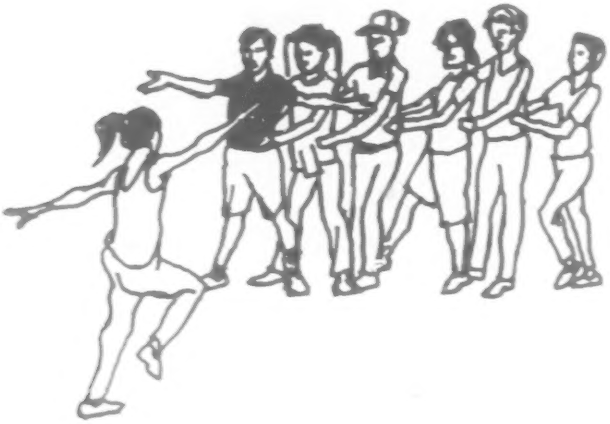
DIRECTIONS

1) One student plays the part of the hawk, and another, the hen, while the rest of the students become chicks.

2) The chicks line up in single file behind the hen, and each chick puts his/her hands around the waist of the one in front of him/her.

3) The hawk starts chasing the chicks. The hen should try to block the hawk in any way, except holding the hawk with his hands (usually blocking the hawk with shoulders and arms is the best way).

4) The chick who is caught will be the next hawk, and the hawk has a choice of being either a chick or the hen. If the latter option is preferred, the hen will be the chick then.



SUGGESTED ACTIVITIES

LANGUAGE/CULTURE

- Create a Chinese New Year's card to exchange with your friends.
- Act out the story of the twelve animals.
- Participate in the New Year's parade by dressing up as your favorite animal of the Lunar Calendar. Cymbals, gongs, and drums may be used in the parade.
- Identify your animal cycle by correlating your birth year with the Chinese animal cycle.
- Do some research to identify the personality traits related to your animal sign and give an oral presentation of your findings. Then, talk about your feelings regarding these traits. (e.g., Do you agree or disagree?)
- Write a story about one of the animals in the cycle.
- Arrange the animals in sequential order on the blackboard according to the Chinese Lunar Calendar.
- Construct the cycle of the twelve animals on a bulletin board.
- Report on why these twelve animals were chosen and are in this order.

SOCIAL STUDIES

- Discuss the following questions in class:
  - What is the Chinese Lunar Calendar?
  - How is it different from the solar calendar that we use?
  - Are there any other types of calendars besides the Chinese Lunar Calendar and the Gregorian Calendar? If there are, describe them.

MATHEMATICS

- Find the distance between the sun and the earth and the distance between the moon and the earth. Which is farther from the earth? How much farther?
- Which animal will represent the year 2020?

- A farmer has some pigs and some roosters. He finds that together they have 14 heads and 40 legs. How many pigs and how many roosters does he have?

- A man bought a horse for $50.00. He sold it for $60.00. Then he bought the horse for $70.00. He sold it again for $80.00. Did the man make or lose money from the exchanges? How much?

SCIENCE

- Among the twelve animals, identify which animal is legendary, which are farm animals, which animals live in the jungle, and which animals do harm to human beings.

- Do some research on these animals (except the legendary one) regarding their habitats, life styles, and life spans.

- Make a graph of the life spans of the eleven animals and find the average of their life spans.

- Describe the influences of the sun and the moon on the earth.

- What is the relationship among the sun, the moon, and the earth? How do they influence one another?

- Do you have animals at home? If so, what kind?

- **Group Work:** Identify domestic animals and wild animals from the twelve animals. Look up the definitions for domestic and wild. What characterizes these two groups? Discuss the differences between them. Write these differences and characteristics on a chart and display it in the classroom.

- Select an animal to do research on for a short report. The report should include where the animal lives, what it eats, what the animal's special needs are, and some interesting facts about the animal.

THE DRAGON BOAT FESTIVAL (Duan Wu)

Duan Wu is the name of the Chinese festival which celebrates the arrival of summer. Duan Wu is usually the fifth day of the fifth month of the Chinese Lunar Calendar. By that time the weather is getting hot. Snakes, bugs, flies, and mosquitoes are making their appearance.

People tend to get sick easily in this weather, so we take all the traditional precautions. We hang cattails and "ai" grass on the front door. Medicinal "Xiong Huang" wine is made for the adults to drink. Children are not allowed to drink it, but their faces and bodies are stained with the strong wine to ward off evil spirits.

On this occasion, children carry small sachet purses which are believed to dispel evil, and also have the practical function of repelling mosquitoes. The sachets have many variations in shape and color. Sandalwood is the most popular scent. Some children's ears and necks are stained bright orange. Some children's foreheads are stained with "tiger stripes" which are said to be powerful enough to keep mosquitoes away.

We also eat salted duck eggs, cooked garlic, and "zong-zi" (sticky rice dumpling) for the occasion. "Zong-zi" is the special food for this festival. There are several ways to prepare "zong-zi" because different provinces have their own methods of making it. The most common kind found here in Chinatown is the one with sticky rice, peanuts, green beans, meat, and preserved egg yolk wrapped in bamboo leaves. The preparation takes a long time and several hours of steaming are required to cook it.

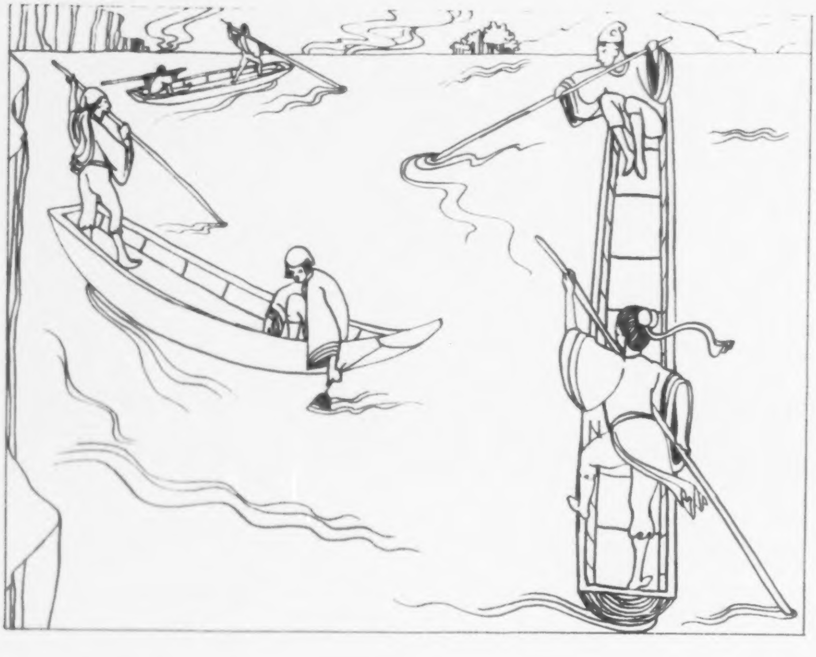
Another big event of this festival is the dragon boat race. Dragon boats are made of wood. They are over a hundred feet long and are narrow and shallow. The bow is carved in the shape of a dragon's head and the stern is like a dragon's tail. Both the bow and the stern are painted in very bright colors and each boat is decorated with many colorful flags. The boat looks just like a real dragon. The rowers sit on both sides. The boats are lined up and the race begins at a given signal. The people on the bank shout and yell to cheer on the rowers. One man in the boat beats the gong and another beats the drum to encourage and provide the rhythm for the rowers. The rowing has to be synchronized, or the boat may lose speed or be overturned. Besides, people also play water games, like trying to dive under water and catching a live duck. This is a very busy day, but it is strange to think that all these activities originally began as ceremonies to honor the poet, Qu Yuan.

More than 2,400 years ago, during the Warring States Period, China was divided into several kingdoms. Qu Yuan was a famous poet and a prime minister in the Chu kingdom. He loved his country and his people very much. He tried hard to help the emperor keep the country out of war. Unfortunately, his political enemies were jealous of him and accused him of criticizing the Emperor. Finally, the Emperor exiled him to the southern part of China. At that time, the southern part of China was a remote area. On his way to the South by boat, Qu Yuan was very upset and wrote several poems expressing his feelings. At last he drowned himself in the river "Mi Luo" because he would rather die than see corruption around him.

After Qu Yuan had jumped into the river, people searched for his body. They rowed around in boats looking for him. They wanted to protect his body from the fish, so they made "zong-zi" and threw them into the water to feed the fish.

People revered the memory of Qu Yuan. They decided to have a festival, and called it the Duan Wu festival. Since then, the Chinese people have held a ceremony, eating "zong-zi" and rowing dragon boats on the anniversary of the day when Qu Yuan jumped into the river. That was the fifth day of the fifth month of the year 278 B.C., and the tradition has been passed down from generation to generation.

Though Qu Yuan died, his spirit and his ideas lived on in his poems, and he is still considered one of the outstanding poets in classical Chinese literature.



IT'S DRAGON BOAT FESTIVAL

It's Dragon Boat Festival. It's Dragon Boat Festival.
Eat rice dumplings and watch the dragon boat race.
Everybody rows very hard,
Hoping to win the first place.

DUAN WU

A Poem of Tang Dynasty
Translated by Ching-Fang Chen

Whom did the Duan Wu Festival
originally honor?
Through the years it has been said
that the festival is to honor Qu Yuan.
Although the water of the River
Mi Luo is vast enough,
It cannot wash away the injustice
a loyal official suffered.

SUGGESTED ACTIVITIES

LANGUAGE/CULTURE

- **Group work:** Do some research on the story of Qu Yuan. Then present a drama or skit about the story.
- Describe the way you spend summer.
- What are some safety measures for playing water games?
- Discuss the importance of learning how to swim.
- What are the techniques of rowing a boat?
- What are some of the traditional customs of the Dragon Boat Festival? Share the information with your classmates.
- If at all possible, bring a "zong-zi" to class, describe its ingredients and the way of making it, and then share it with your classmates.

SOCIAL STUDIES

- Discuss the origin of the Dragon Boat Festival and the importance of being loyal to one's country.
- Do some research on the Chinese Chu Dynasty and report to the class.
- When working as a team, what should we do to make our team succeed?
- What are the responsibilities of a citizen?
- Can you name some of the provinces in China?
- If you come from China, do you know which province you come from?
- Is there a better way to solve Qu Yuan's problem?
- Invite family or community members to class to narrate Chinese folk tales and legends.

SCIENCE

- How do flies and mosquitoes harm people?
- What can you do to prevent the diseases that are caused by flies and mosquitoes?
- Why does unsynchronized rowing make a dragon boat lose speed or overturn?
- In which areas of the world do most bamboo trees grow?
- What environmental changes are there in the summer in New York City?
- Describe the weather at this time of year.
- What kind of power makes the dragon boat move? Find out about other kinds of power that make a boat move. Describe them, give examples, and then draw pictures of these different kinds of boats.
- Many famous inventors got their ideas from the world of living things. The idea for one invention came from the mosquito. What invention was it? How do you know?
- Think of an animal that might have given you the idea of inventing the boat. What animal have you chosen? How did this animal give you the idea for the boat?

MATHEMATICS

- Develop a math word problem that incorporates your family and then solve it. The problem should include the following: number of people in your family, number of rice dumplings you want to make for your family, unit cost of each ingredient, and quantity of each ingredient. Then find out the total cost of all the dumplings and the cost per dumpling. The answers will vary since the situation of each family is different.

THE MOON FESTIVAL (Zhong Qiu)

In the fields the standing grain has ripened. In the garden there is a bumper harvest of fruits and melons. The osmanthus flower spreads its sweet fragrance and the autumn wind paints the mountains bright gold. This is an enchanted season. It is the eight month of the Chinese calendar, and the harvest moon is big and bright. People have been working all year and now they will be rewarded by celebrating the Zhong Qiu festival.

During the Zhong Qiu festival poets and scholars gather on boats to view the moon, sing and write poetry. Among the Chinese people, all the members of the family return home to be together on this occasion. The roundness of the moon symbolizes the union of the family circle. People eat sweet "moon cakes" and enjoy viewing the moon. They set the table with fresh flowers, fruits, desserts and wine, and hold a ceremony in honor of the moon. If some members of the family cannot return home for the occasion, a slice of moon cake is saved for them.

According to a Chinese legend, a beautiful queen of the Xia Dynasty (2202-1818 B.C.), Chang Er, stole a drug of immortality and youth from her husband who was a bad king so that he would not be able to take this drug. The King wanted to get the drug back and started to chase Chang Er. Having no place to hide the drug, she swallowed it. After she swallowed the drug, Chang Er ascended to the moon. She remained on the moon, and her youth and beauty were preserved forever.

Another resident on the moon is Yue Lao, the old man in the moon. He is the matchmaker who is in charge of all marriages made on earth. It is his duty to tie destined couples with a red string which will bind them for life. Chinese maidens burn incense to Yueh Lao and to the moon, praying for a vision of their future husbands.

There is a legend about the mooncake, too. Seven hundred years ago, the Chinese emperor led his army on a maneuver to push the Mongols out of China. He came to a strongly defended castle which he attacked but could not defeat. A Chinese scholar came up with a brilliant scheme. He had people make small, sweet cakes as round as the moon, then send the cakes into the castle. The Mongols had never eaten Chinese cakes and ignored them, so the cakes were sold to the Chinese people within the castle. Inside the moon cakes the people found slips of paper which told them: "On Zhong Qiu Eve, kill the Mongols. Help the righteous Chinese army."

The Chinese people had hated the Mongols for a long time because of their cruelty. When the people read the message placed in the moon cakes, they revolted. They rose up and killed the Mongol soldiers, opened the gates of the castle, and welcomed the Chinese army.

Whenever we gather together and eat our moon cakes, we Chinese are reminded of this chapter in our history.

MOONCAKES

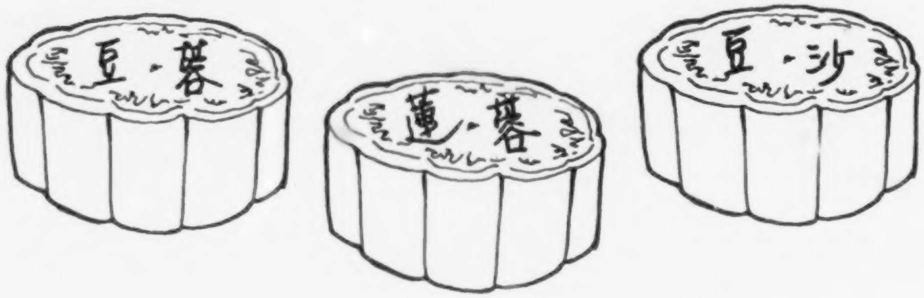
Have you even seen the Chinese mooncakes? Do you know why most of the mooncakes are round with an egg yolk in the heart? The circle symbolizes the harvest moon and the agricultural cycle. This symbol is echoed in many special foods eaten at this time of year.

INGREDIENTS

- 2 packages of sweetmilk biscuit dough
- ¼ cup of filling (see Method 2)
- 1 egg
- ¼ cup of sugar
- 2 tsp water

METHOD

1. Divide each package of dough into 10 biscuits. Put the first 10 onto a cookie sheet.
2. Put a spoonful of filling in the center of each biscuit. The filling may be dousha or red bean paste, dourong or yellow bean paste, or lianrong or lotus seed paste.
3. Top each biscuit with a second one and press the edges together.
4. Beat the egg, adding the sugar gradually with the water. Brush this mixture on the top and sides of each biscuit.
5. Bake the biscuits according to the directions on the package.



IT'S MOON FESTIVAL

It's Moon Festival. It's Moon Festival.
Eat moon cakes and watch the beautiful moon.
Singing songs and clapping hands,
Every family is celebrating its reunion.

CHANG ER

Li Shang-yin

Now that a candle shadow stands
on the screen of carven marble.
And the River of Heaven slants and
the morning stars are low.
Are you sorry for having stolen
the potion that has set you
Over purple seas and blue skies
to brood through the long nights?

SUGGESTED ACTIVITIES

LANGUAGE/CULTURE

- Describe the beauty of a full moon.
- Try to read some stories about the moon and tell the story you like best in class.
- If it is possible, bring a moon cake to class, describe its ingredients and the way of making it, and then share it with your classmates.
- Compare the moon cake sent into the castle seven hundred years ago with the fortune cookies you eat in a Chinese restaurant.
- What are some of the traditional customs of the Moon Festival? Share the information with your classmates.

SOCIAL STUDIES

- What is the value you place on family?
- What is the relationship between family and society?
- Invite family or community members to class to describe the way they celebrate the Moon Festival.
- What dynasty ruled in China seven hundred years ago?
- Can you locate Mongolia on the map? Where in China is it? What are its neighboring countries? Between what latitudes and longitudes is it located?
- There is a Chinese saying: "A happy family can bring about a steady nation and a steady nation can bring about a peaceful world". Discuss the importance of a family.

SCIENCE

- What kinds of fruits and crops ripen in the autumn in the United States?
- If you want to live a long life, what measures will you take to keep yourself young and healthy?
- Observe the full moon at night using a telescope or binoculars and tell the class what you see in the moon.

- What environmental changes are there in the autumn in New York City?

- Describe the weather at this time of year.

- Do some research on the moon regarding its size, atmosphere, environment, rock, surface, etc., and then report to the class.

- After Neil Armstrong made the first human lunar landing in 1969, the beautiful fantasy of the Chinese people about Chang Er was broken. However, the story is still popular on this occasion nowadays. Try to find out how Neil Armstrong and the others got to the moon, how they could live on the moon, what they did on the moon, how long they stayed there, how they got back to the earth, and what they brought back from the moon.

MATH

- A farmer hires 15 workers to gather crops at harvest time. He wants them to work 7 hours a day from September 15 to September 20. He pays them the minimum wage which is $4.25 per hour. What is the total amount of wages he has to pay?

- Write a math word problem as it relates to your family and then solve it. The problem should include the following: number of people in your family, number of moon cakes you want to make for your family, unit cost of each ingredient, and quantity of each ingredient. Then find out the total cost of all the moon cakes and the cost per cake. The answer will vary since the situation of each family is different.

SECTION III: CHINESE INVENTIONS

CHINESE INVENTIONS - CAN YOU NAME THEM?

Silk - The Chinese knew how to produce silk by 1300 B.C., but not until the second century B.C. did it begin to be exported to Europe and not until 550 A.D., when monks who had travelled to China and brought back silkworm eggs, did the West learn the Chinese secret of silk-making.

Tea - Tea drinking originated in China and spread throughout the world.

Porcelain - Porcelain, also called "china", is a type of clay pottery that was invented in China by using clay with special minerals.

Paper - Paper was first invented in China about 105 A.D. Its use then spread to Chinese Turkestan in Central Asia, the Arab world (c.751 A.D.), Syria, Egypt, Morocco, Spain (c.1150 A.D.), southern France and the rest of Europe.

Printing - The Chinese invented both block printing to reproduce the Confucian classics that had often been carved on stone and movable type.

Gunpowder - Gunpowder was invented in China (c.1000 A.D.) and probably spread to Europe during the Mongol expansion of 1200-1300 A.D., but this is not proven.

Compass - Historians believe that the Chinese invented the magnetic compass and used it for navigation (c.220 A.D.).

Alchemy - (Chemistry). The Taoist search for the elixir of life (a life-extending potion) leads to much experimentation with changing the state of minerals. The Chinese practice appears to have spread first to the Arab world and then to Europe.

Civil Service - Exams for government service were introduced in both France and England in the 1800s, apparently inspired by the Chinese practice instituted almost two thousand years earlier, in 165 B.C.

Grain Storage - Henry A. Wallace, U.S. Secretary of Agriculture from 1933 to 1940, introduced governmental storage of excess grain after reading the dissertation of a Chinese student at Columbia University on Confucian economic policies. Wallace adopted the Confucian notion of government grain purchases to provide for times of scarcity and he introduced the practice in the United States to deal with over-production due to mechanization and resulting depressed agricultural prices.

Armillary Sphere and Seismograph - invented by Zhang Heng of the Han Dynasty.

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Other - The Gan Shi Xing Jing (Gan Shi Catalogue of Stars) of the Warring States Period is the earliest catlogue of fixed stars in the world.

Some of the West's most popular fruits - peaches, apricots and citrus fruits - come from China, as did some of the most common flowers, such as chrysanthemums. The West also learned of goldfish and wallpaper from China and may have adopted the Chinese idea of the folding umbrella.

Many Western political and social thinkers admired the Chinese bureaucratic system of government. In particular, the German philosopher and mathematician Leibnitz (1646-1716), the Frenchman Voltaire (1694-1778) and the French political economists of the late 1700s, known as the Physiocrats, were inspired by Chinese thought, as was America's Ralph Waldo Emerson.

The Invention of the Compass

Curiosity and necessity brought about the invention of the compass. The story of this direction-pointing device begins early in China's ancient history and covers many stages.

One Chinese legend was credited with the earliest reference to a direction-pointing device. It is a legend about Huang Di, the Yellow Emperor's South-pointing chariot. The emperor's name is Xuan Yuan. He organized the neighboring tribes to fight against the invaders from the north led by Chi You. In a battle called "Zhulu Zhi Zhan", Huang Di invented the south-pointing chariot to guide his troops in a heavy fog. It was his chariot that led his troops to defeat his enemies led by Chi You.

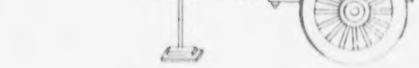
Another chariot with a south-pointing devices was invented in the Han Dynasty (206 B.C.- A.D. 220) by Zhang Heng, who also invented the seismograph in A.D. 132. The chariot was two-wheeled vehicle. The wheels were hooked up to the gears by driving belts. An arm, extending from the chariot, is ingeniously connected to the gearing. No matter in what direction the chariot headed, the extended arm always pointed to the south.

An early development that had more to do with the creation of an actual compass was a south-pointing-fish-shaped device described in a Chinese military manual by Zheng Gong-Liang in A.D. 1044. It is not known if the device has ever been put to use.

Ancient Chinese technologists went on to develop still another compass, one that consisted of a short length of wood carved in the form of a fish. A piece of lodestone was embedded in its belly. The crude compass needle was then placed in a bowl of water. Picking up the earth's magnetic field, the compass needle floated in a north-south direction. This invention is generally pointed to as the first practical liquid compass and appears to have been in existence since A.D. 1100. A crude type of the so-called dry compass was then created after the liquid model.

As a device for direction-pointing, the liquid compass was the first to be made use of by the Chinese. Chinese seamen used the liquid compass for navigation as early as the eleventh century.

Westerners probably found out about the compass near the end of the twelfth century; some of their earliest records on this device appeared about this time.



Model of a Chariot with south-pointing devices

COMPASS

Like the sailors of several centuries ago, you can now make your own compass. All you need is a small magnet that can swing around easily. If the magnet is free to swing, it will turn until it points north and south. This kind of compass works because the earth acts like a magnet. Like all magnets, the earth has two magnetic poles. However, because these magnetic poles and the true geographic poles are not in exactly the same places, compasses do not point true north or south.

MATERIALS

- bar magnet
- steel needle
- nylon thread
- 50 cm transparent tape
- paper clip

MAKING A COMPASS

A. Obtain the materials.

B. Place a needle on the top of your desk.

C Hold the eye end of the needle down with your finger.

D. Starting near the eye end of the needle, stroke the needle with the south pole of a magnet. Stroke in one direction. When you get to the end of the needle, lift the magnet up and return it to the eye end of the needle. Stroke the needle again. Repeat this 10 or 15 times.

E. Tie a thread around the center of the needle. Hang the needle by the thread so that it swings freely.

1. In what direction does the needle point?

   If the needle does not point in any particular direction, stroke it with the magnet several more times.

2. Which kind of magnetic pole is the point of the needle?

   This hanging needle can be used as a crude compass but it has limitations.

F. Twist the thread in one direction about 20 times while the needle is hanging from it. Release the thread.

3. Does the needle point in the same direction as before?

G. Bring a paper clip near the hanging needle.

4. Does the paper clip affect the direction of the needle?

5. How do you think rubbing the needle with the north pole of a magnet (see step D) would have affected the needle's magnetism? Try it.

PAPER

Social Studies

- Paper making in the olden days
- Study China's early paper
- Study the world before paper
- Study the history of Chinese paper-cutting techniques

Art

- Make recycled paper
- Collect different kinds of paper
- Custom printing
- Book binding techniques
- Make sized paper
- Make ink
- Make natural dye
- Make a card
- Make tapa cloth
- Create water mark
- Embed things in the paper
- Make an impression in the paper
- Chinese paper folding
- Chinese paper cutting
- Make paper beads and jewelry
- Make puppets
- Make torn paper pictures

Math

- Graphing
- Maps
- Area
- Shapes

Science

- What kinds of fibers make the best paper?
- Recycling paper in your home
- Why trees are important
- Make grass paper
- Make paper with fabric
- Make paper from other plants
- How a paper mill works
- Make white paper
- Paper from junk mail
- How does sizing affect the ability of paper to absorb ink?
- How many times can paper be recycled?
- Record the speed to break down recycled/nonrecycled paper
- Plant a tree

Language Arts

- Make big books
- Make pop-up books
- Create book covers

THE FIRST PAPER

Paper was invented in China in the year 105 A.D. Chinese history credits the invention to a man named Cai Lun, an official who worked for the emperor.

A story about Cai Lun relates how he may have gotten the idea for making paper. As a little boy, he liked to watch wasps build their nests in his family's garden. He was fascinated by the way they chewed tree bark and spit out balls of a doughy substance, which they formed into a nest just the right size and shape to make a home for their young.

When he was older, Cai Lun saw some farmers tear down a wasp's nest because they were afraid of being stung while they worked. He picked up the pieces of the nest. They were light in weight, but strong. He tried writing on them using the traditional Chinese brush and ink and found it had a much better writing surface than tree bark (which many people used in those days) or animal skins, which required a lot of work to prepare properly. He remembered seeing the wasps build their nests when he was a boy, and he decided to do what they did, but with an important variation. Instead of hiring many people to chew tree bark and spit it out, he mashed a huge mass of bark in a stone-lined pit, then pressed the resulting pulpy glob into long thin sheets. When dry, these became a perfect material on which people could write letters and draw wonderful brushed-ink pictures of trees, birds, cats, and tigers for which China became famous.

Whether or not this tale is true, almost 2,000 years ago, China did develop a very important papermaking industry. During the next few centuries, the Chinese also made important advances in printing on paper. By 868 A.D., they were carving the characters that made up their words on blocks of wood. They inked the blocks with a paint brush and pressed paper on them.

About 200 years later, a man named Bi Sheng invented a method of holding together clay blocks of characters to make up a complete document. Because the blocks could be separated and rearranged to print a different document, the process was called movable type. In 1313, an improvement, wooden blocks set in cases, came into use.

As a result of these inventions, it became possible for the Chinese to make books to read long before most Europeans could even write their own names. Chinese emperors were proud of their book collections. One was said to have had over 50,000 books in his personal library.

PAPER SPREADS AROUND THE WORLD

In 610 A.D., paper was introduced in Japan. Paper and, later, the techniques of papermaking were transmitted along the trade routes to the Arab world. The Moors, who were from Morocco, brought paper to Spain around 1150. It came to Italy in 1250. In 1266, the Italian traveler Marco Polo was amazed to find the Chinese using paper money. Soon after, paper appeared in Germany and France and, by 1495, in England.

A German named Johann Gutenberg is believed to be the first European to invent a printing press using movable type made of metal. By using molds filled with lead to make the type, large quantities of each letter of the alphabet were made exactly alike. The type could be rearranged at will, used repeatedly, and removed easily. The finished document had uniform lettering and could be copied again and again. Since thousands of letters are needed to write a book, this invention was revolutionary. In 1455, Gutenberg printed a Bible on paper that he made himself.

The development of the printing press triggered an increased demand for books and paper. Papermaking was no longer confined to the printers who made paper as they needed it, but became a major industry in its own right.

Papermaking in America began in Germantown, Pennsylvania, in 1690, when two men named William Rittenhouse and William Bradford built the first papermill, the Rittenhouse Mill. In the early 1700s, this mill was among the first recyclers in the country, using wastepaper to produce newsprint, and rags for fine paper.

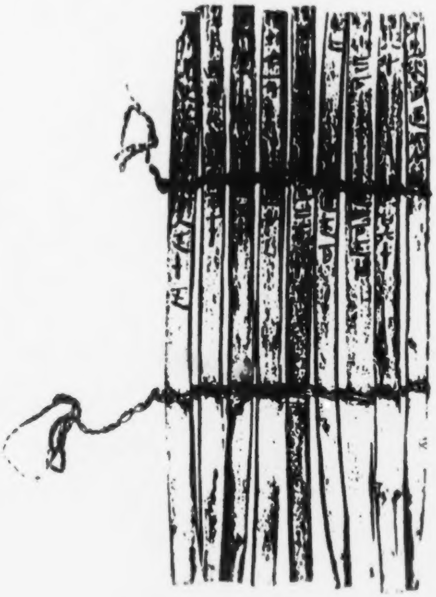
- Have children work in small cooperative groups. Give each group a copy of the world map. With the use of crayons or marking pens, have children trace the route paper took as it spread around the world.

CHINA'S EARLY 'PAPER'

Over two thousand years ago, during China's Warring State Period, the well-studied Hui Shi, prime minister of the state of Liang, was among the good friends of Zhuangzi.

Hui Shi's love of books was legend, even in his lifetime. And for good reason. Anytime he went traveling, he felt a compulsion to take all his books with him - and not just a suitcase or two, but enough for five fully loaded oxcarts. The millennial Chinese saying, "knowledge rich as five oxcarts," is still current today when praising someone's scholarship.

Yet, in actuality, the amount of reading material in Hui Shi's five book-carts was probably less than that on the bookshelves of any of today's middle school students: The old books of Hui Shi's day were all composed of large and cumbersome carved bamboo "pages" strung together with strips of leather.



Bundle of bamboo slips from the tomb of the Marquis of Dai at Mahuangdui, Changsha, Hunan province, 2nd century BC. Individual strips of bamboo or wood were strung together and rolled up to form a book.

PAPERCUTS IN CHINA'S PAST

When holidays roll around, we want to spread our good feelings and excitement by decorating things around us. We want to fill our ordinary, plain world with bright, fresh colors and shapes. Holidays are a good time to make papercuts.

This is what the Chinese have done for about nineteen hundred years. In ancient times the papercutter made paper- cuts to please his ruler. The emperor would give his guests these special papercuts at the New Year's festivities.

But it was not necessary to be an emperor to have papercuts. The common people had paper, too, and soon it became popular for everyone to decorate with papercuts on special occasions. The working people were not trained artists, but they had an eye for beauty anyway. With bits of colored paper and a kitchen knife or sewing scissors, flowers could bloom in their homes. They called the papercuts huang hua, "window flowers." Some men became very skilled at paper cutting. Such a skilled person was called a master. The master's whole family would help make his papercuts. The master created his own style, developing special tools for punching out holes and curves of different shapes. The best designs were passed down from generation to generation within a family. Often a village or region would become famous for a certain kind of papercut.

The most special time of the year in China is New Year's. The Chinese remind themselves that although the earth seems cold and dead, spring will soon come and life will begin again. New Year's is a time for making resolutions, a time for making all things new.

Until recently, most windows in Chinese homes were made of tough paper instead of glass. New Year's was the time to replace the window paper. On the new paper, fresh window flowers would be glued to be enjoyed from the inside at night. Paper that covered the walls was replaced, too, and bright new papercuts were put on the fresh walls.

Large papercuts were pasted on the ceiling; papercuts decorated mirrors. Papercuts also decorated the pictures of the gods of health, wealth, and long life that were put up outside near the front door.

Today papercuts remain an important part of the Chinese New Year's celebration. Papercuts decorate houses; they appear on presents and lanterns; they fly like tiny flag atop cakes and other dishes. Papercuts are used for birthdays, weddings, and other special days, too. On national holidays the streets are aglow with paper decorations, including streamers covered with papercut calligraphy, or writing, wishing all well.

Many papercuts were used for good luck in the old days. One design was supposed to bring rain; another, protection against fire. Cuts were displayed in hopes of bringing health, wealth, or a new baby into a family.

Papercuts have been used as embroidery patterns. A papercut is pasted on cloth, then stitched over until the pattern is covered.

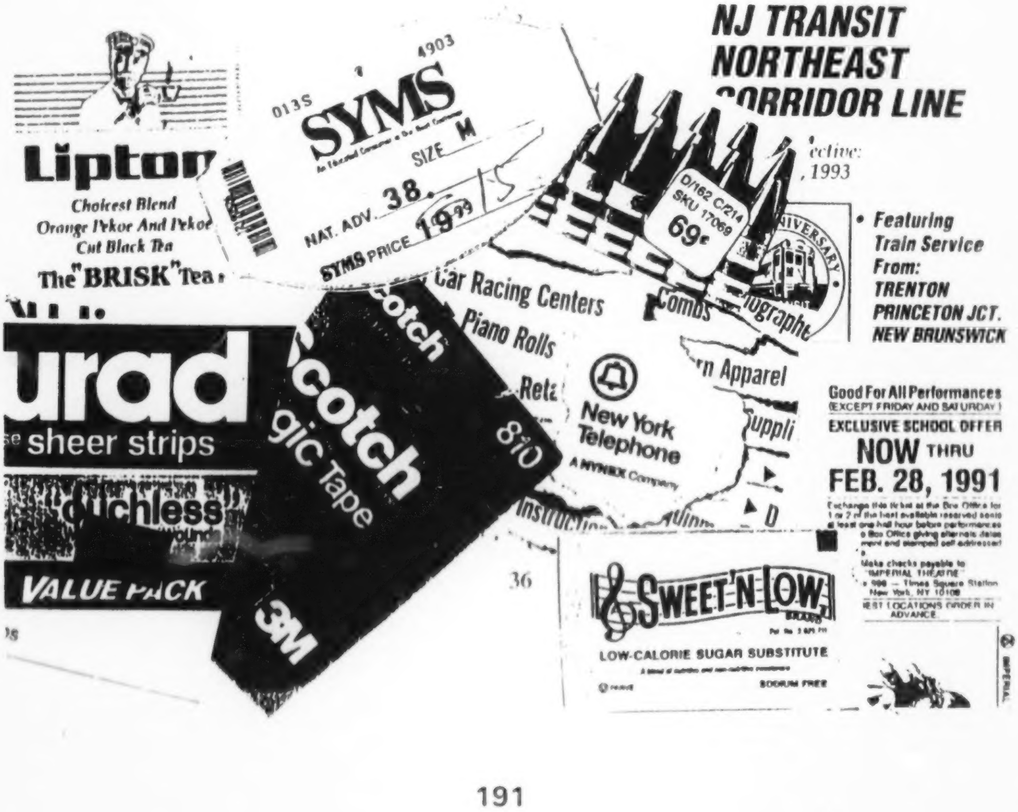
Papercuts are used in the technique called stencilling. A design is cut from heavy waterproof paper, then color is brushed through the cutout areas onto cloth. Papercuts make good shadow puppets, too. The cutouts are mounted on sticks and held before a lighted screen.

ALL KINDS OF PAPER

Little can happen in modern life without paper or board. We depend on this paradoxical material. It is permanent or transient; delicate or strong; cheap or expensive; in abundance or scarce. It can be preserved in a museum or thrown away. It can decompose in water, yet boat hulls have been made from it . It is made and used by the millions of tons or may be so rare that only a few tons of hand-made paper are produced in a year.

Paper may be impregnated, enamelled, metallized, made to look like parchment, crêped, water-proofed, waxed, glazed, sensitized, bent, turned, folded, twisted, crumpled, cut, torn, dissolved, macerated, moulded, embossed. It may be colored, coated, printed, marked and the mark erased. It may be laminated with itself and with fabric, plastic and metal. It may be made opaque, translucent or transparent. It may be made to burn or be made fire-proof. It may be a carrier or a barrier or a filter. It may be made tough enough to withstand acid or soft enough for a baby's skin. It may disintegrate or it may be re-used.

The range of possible uses of paper seems almost limitless. New ways of using it are being devised daily. This evolution will continue because paper is a part of everyday living.


Lipton
Choicest Blend
Orange Pekoe And Pekoe
Cut Black Tea
The "BRISK" Tea
SYMS
4903
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(EXCEPT FRIDAY AND SATURDAY)
EXCLUSIVE SCHOOL OFFER
NOW THRU
FEB. 28, 1991
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SWEET'N LOW
LOW-CALORIE SUGAR SUBSTITUTE
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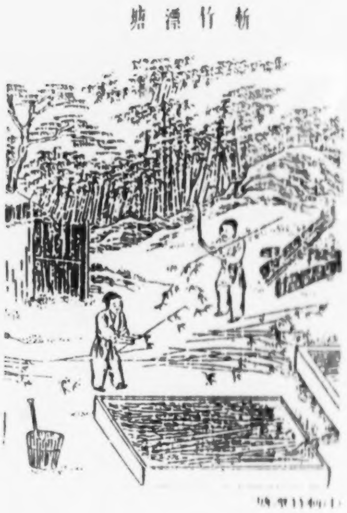
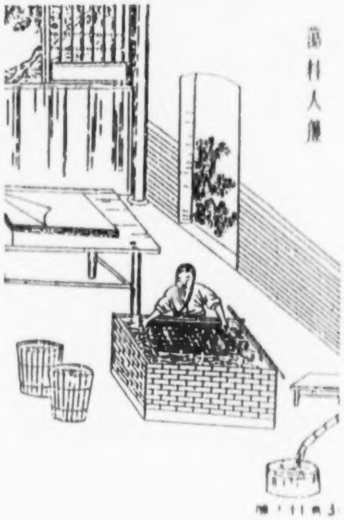
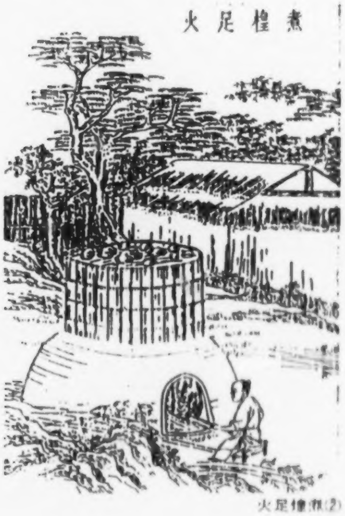
The following Chinese woodcuts showing five (5) stages of paper-making.

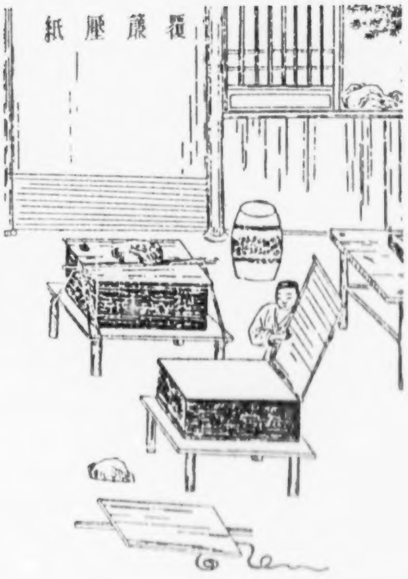




Cut lengths of bamboo were first soaked in flowing water then (below) boiled over a bamboo-fueled kiln at the start of the paper-making process.

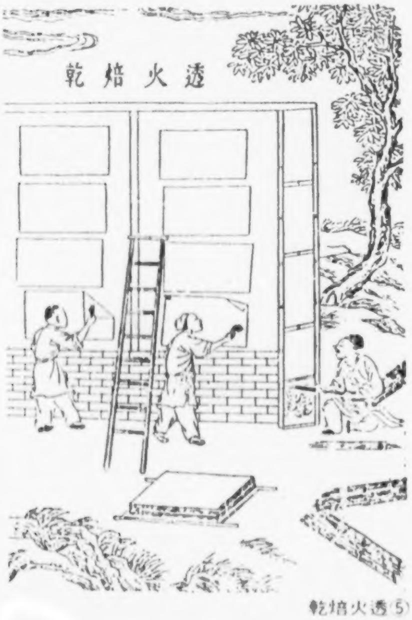
The boiled bamboo was pounded to pulp via several means, then the pulpy-paste solution was withdrawn from the vat "a sheet" at a time on bamboo screens.





紙壓簾覆(4)

The wet sheets, flipped off the screens onto a pile, were later weighted down with a rock to squeeze out moisture.



乾焙火透(5)

The still-moist sheets were dried on racks over low heat.

LET'S MAKE RECYCLED PAPER

Here is a simple way to make new paper out of scraps of used paper. Magazines, newspapers, wrapping paper, paper towels or napkins, even cardboard egg cartons all work well. You can pick paper that is all the same color or choose lots of different colors and mix them together. Remove all staples, cellophane windows, and other nonpaper bits from the material before starting.

The first few times you make paper it will probably be about the consistency of an egg carton. However, by experimenting with various thicknesses of slurry, trying out different kinds of paper, using the natural dyes and practicing the couching technique, you'll be making artistic and functional paper in no time at all!

Making paper with children has a threefold purpose: it demonstrates paper-making as a skill and art; it shows another use for paper waste; and it illustrates that substance is constant despite changes in form. Hopefully, this activity will also encourage recycling on a daily basis, a necessary activity for all of us.

MATERIALS

- used paper: newspaper, computer paper, or paper towels
- 1 blender
- 1 old window screen
- 1 pan or tub that is slightly smaller than the screen
- sponges, dry paper towels
- iron

METHOD

1. Tear up the paper into tiny pieces. Put the pieces in a blender that is ¾ full of hot water. Process to make pulp.
2. Put the wire screen over the pan and empty the contents of the blender onto the wire screen.
3. Press down and smooth the pulp by hand. Sponge the excess water off the pulp until it feels dry.
4. Put a paper towel over the pulp, then invert the screen so that the pulp is on top of the paper towel. Sponge dry. For quick results, put a second towel over the pulp and iron the pulp dry with a warm iron.
5. Produce a second batch of colored (orange, red) paper by adding vegetable scraps (carrot skins, beet peels) to the pulp.
6. Older children may want to personalize their paper by laying flower petals, small strips of colored paper, or colored threads on the screen before the pulp is poured.

FABULOUS FIBERS

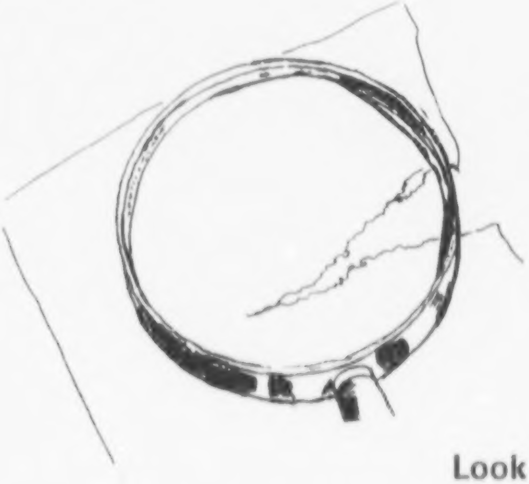
Why does the pulp stick together to make a sheet of paper? Why does it not just fall apart? To understand, you need to look closely at paper. If you look at it through a microscope or magnifying glass, you will see lots of tiny, threadlike pieces. These are called fibers. Fibers are found in trees and in plants such as cotton or linen, as well as in some animal hair, such as wool.

Not all fibers can be used to make paper. If fibers are to be used in papermaking, they must be able to absorb water. The water bonds or sticks to the fibers as the fiber and water are beaten together. When you beat paper in your blender, you are bonding the water and the fibers.

As the water drains through the mesh, the fibers are pulled together and held by their rough surfaces.

The longer the fibers, the stronger the paper they will make. Each time you recycle paper, you make the fibers shorter, and the paper will not be as strong.

Do you remember the sheet of newspaper that you ripped? Most paper will rip more easily in the direction that the fibers lie. This direction is called the grain of the paper.



Look at the Fibers

Gather samples of several different types of paper and slowly rip each one in half. Carefully examine the edges of the paper using a magnifying glass or a microscope. Do you see the tiny hairlike threads sticking out of the torn edge of the paper? These are the fibers. Compare the different paper fibers to each other. Which kinds of paper have longer fibers? Which kind of paper is the hardest to rip?

A FAIR IDEA

Do you need an idea for a science project or a science fair?

1. What kinds of fibers make the best paper? Make paper using newspaper, cardboard, colored paper, previously recycled paper, and so on. Which looks the best? Which is the strongest?
2. How many times can paper be recycled before it no longer forms paper? Make some paper. Let it dry, then recycle it again and again and again. How many times can you do this before it becomes unusable?
3. Does recycled paper break down faster than non-recycled paper. Bury different samples of paper in your garden or school yard and record the speed with which they break down.
4. How can recycled paper be made whiter without using bleach?

CUSTOM PRINTING

For customizing your handmade paper, you can create your own personal stamps.

You will need the following:

- A potato - any hard vegetable will do
- A pencil and paper
- A felt tip pen
- A knife
- A stamp pad or paint
- Handmade paper

DIRECTIONS

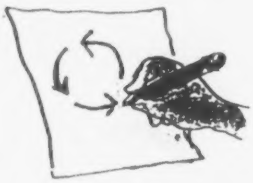
1. Draw a simple design on a piece of paper. (A simple design prints best). Keep the design smaller than the potato.

2. Cut the potato in half. Carefully lay the design over the potato and, using the sharp end of the pencil, trace the design onto the inside of the potato by poking holes through the paper into the potato.

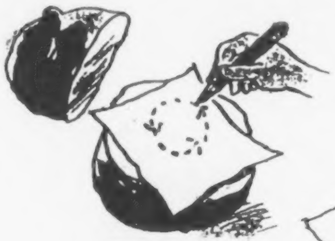
3. Remove the paper and trace the outline of the design with a felt-tip pen.

4. Starting from the design and working outward, carve away the potato, leaving the design raised at least ½ inch (1 cm).

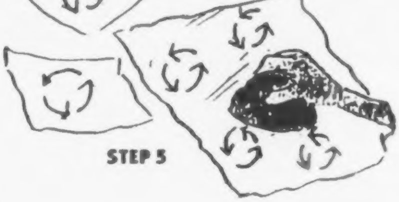
5. Press your custom stamp on an ink pad or lightly into paint, then apply it to your handmade paper.



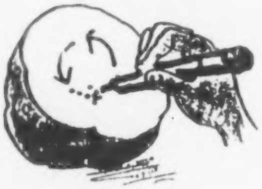
STEP 1



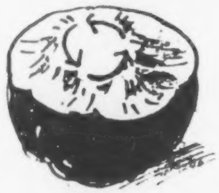
STEP 2



STEP 5



STEP 3



STEP 4

BE A PAPER SAVER

Take A Guess: If you stacked up all the paper an average American uses in a year, the pile would be as tall as...

A) A car B) An elephant's eye C) A two-story house

It takes years for a tree to grow enough to be made into paper. And it takes many forests to make all the paper we use...and throw away.

Wouldn't it be great if old paper could be turned back into new paper? Then we'd have more trees and a greener world. We can make that happen -- there is a way. We can recycle our paper.

Did You Know

- Americans use 85 million tons of paper every year, about 680 pounds for each person.
- How much is that? The paper that four people use in a year weighs as much as a big car.
- To make all that paper, we use more than a billion trees!
- If everyone in the U.S. recycled their newspapers (including the comics), we'd save 500,000 trees every week.

What You Can Do

- You can recycle all kinds of paper - cereal boxes, note paper, bags, newspaper, and so on.
- To start recycling in your house, first find a place where you can put a pile of newspapers and a box for collecting other types of paper.
- Whenever you empty a cereal box, or get ready to toss out a piece of paper, put it in the box instead of the garbage. If you get a newspaper delivered to your house, stack it neatly on the pile every day.
- Don't put shiny paper or paper with plastic attached to it in your box - you can't recycle that stuff.
- Ask a parent to find out where the nearest recycling center is. Maybe your neighborhood has a curbside recycling program. That would really make it easy!
- Every week or two, tie the newspapers into small bundles and take them (and other paper) to the recycling center or put them on the curb for pickup.
- **Extra Tip:** Don't use just one side of a piece of paper - use the other side for scrap paper. That's recycling, too.

SETTING UP A RECYCLE CRAFT BOX

Set up a large box in the garage or closet to be filled with treasures that would otherwise end up in the trash. Some things to collect are empty cardboard, paper, junk mail, poster board scraps, wrapping paper, etc.

PAPER RECYCLING CHART

Gather all the garbage in The Recycle Craft Box. As a group, discuss the characteristics of the trash: size, color, weight, shape, material, etc. Sort the items according to size; then sort according to color, material, shape, or weight. Divide students into groups and assign them a characteristic. Have each group make a chart of their items (see examples below). they can draw and cut out a sample for each item to glue to the chart, or they can attach self-stick notes to the chart. A simple bar graph could be made as a follow-up to the picture graph.

Picture Graph

Recycling Materials
Newspaper
Junk Mail
Cardboard Box
Paper

Bar Graph

Recycling Materials			
News-paper	Junk Mail	Cardboard Box	Paper

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ENVIRONMENTAL ORGANIZATIONS

If you'd like to get involved, there are many organizations you can contact.

American Paper Institute
260 Madison Avenue
New York, New York 10016

Environmental Defense Fund
257 Park Avenue South
New York, New York 10010

Environmental Hazards Management Institute
10 Newmarket Road
Durham, NC 03824

Greenpeace
578 Bloor Street West
Toronto, Ontario M6G 1K2

Sierra Club
730 Polk Street
San Francisco, AC 94109

World Wildlife Fund
1250 24th Street NW
Washington, DC 20037

Canadian Environmental Network
P.O. Box 1289, Station B
Ottawa, Ontario K1P 5R3

Environmental Defense Fund
Recycling Hotline
1-800-CALLEDF

Friends of the Earth
530 7th Street SE
Washington, DC 20003

Greenpeace
1436 U Street NW
Washington, DC 20009

World Wildlife Fund
60 St. Clair Avenue East #201
Toronto, Ontario M4T 1N5

Places To Order Papermaking Supplies:

There are companies that you can buy pulp from. Check your yellow pages under Artists' Materials and Supplies for a company near you. Not all companies sell to individuals. Look for those that say "retail sale."

APPENDIX A

SOME FACTS ABOUT NEW YORK CITY'S CHINATOWN

Chinatown, where 150,000 Chinese live sandwiched between Little Italy and the lower east side, remains the hub of the city's mainland and Hong Kong Chinese communities. But high Manhattan rents have driven many working-class immigrants to Brooklyn's Sunset Park, where Chinese restaurants, beauty salons and groceries line Eighth Ave. More than 60,000 Taiwanese, many affluent professionals, have settled in Flushing, now New York's second Chinatown.

THE ARRIVALS

The Chinese began immigrating to the U.S. following the California Gold Rush of 1849, which inspired the Chinese name for America: gold mountain. A few early immigrants came to New York, opening stores on Mott Street in the 1860's. Anti-Chinese hysteria exploded into violence against Asians in the West during the late 1800s and led to the Chinese Exclusion Acts, which reduced immigration to a trickle.

The Exclusion Acts were repealed during World War II, but the heavy influx of Chinese immigrants did not begin until the late 1960's. In 1965, President Kennedy signed an immigration bill which enabled more Chinese to immigrate to America. Prior to that time, there were strict quotas limiting the number of Chinese.

In the 60's and 70's, the Chinese came to America from Taiwan, Hong Kong and Southeast Asia. They spoke different dialects, and many of them practiced customs different from those of the Cantonese who had immigrated to America earlier.

There are Chinese from the Philippines, Thailand, Malaysia and Indonesia. After the Vietnam War, many ethnic Chinese left that country. Some fled racial persecution by the new Vietnamese government. They left on boats, and many drowned when their crafts capsized. The more fortunate were picked up by rescue ships and eventually came to the United States. These Chinese went through great hardships to come to this country and have become our new citizens, ready to adapt themselves to their adopted land. Many of these Chinese newcomers are refugees.

By 1980, the census showed that New York had 124,764 Chinese residents. The number had grown to an estimated 310,000 by 1988, making New York's Chinese community the largest in the United States.

WORK

While the Chinese can be found in nearly every type of business, recent immigrants are clustered in restaurant and garment jobs, which together employ more than 35,000 Chinese. One in six Chinese lives in poverty, according to the Regional Plan Association.

TASTE OF THE TOWN

Guangdong (Canton) people were the first Chinese immigrants, so Americans are most familiar with their cuisine, considered among the finest in China. The Cantonese favor roasted meats, blackbean sauces and the rapid, high-flame cooking style known as stir-frying. The spicy cooking of Hunan and Sichuan provinces is also popular. Breakfast (common in all provinces) is dim sum, an assortment of fried, steamed, stewed, wrapped or rolled dumplings. Restaurants range from cramped noodle and rice shops to new multi-level palaces. Chinese restaurants can be found in almost every section of the city, but the greatest concentrations are in Chinatown and the Main Street area of Flushing, Queens.

APPENDIX B

ACHIEVEMENTS AND CONTRIBUTIONS OF CHINESE AMERICANS

For almost one hundred and fifty years, Chinese-Americans have contributed greatly, both as a group and on individual level, to the development of America.

"Chinese Pump"

The Chinese were among the original '49ers in California. They developed new techniques for mining gold such as using a chain pump other miners called a "Chinese Pump." Chinese miners worked in Montana, Washington, Oregon and Idaho. Besides gold mining, they worked in quicksilver, coal, and cinnabar mining. The California Legislature of the 1850's drove Chinese out of the gold mines with the costly "foreign miner's tax".

Building A Canal In the South

A canal had to be expanded in Augusta, Georgia, to provide more power for new factories, and Chinese workers from the West were recruited to build it. In 1873, two hundred Chinese came to work on the canal. They were very energetic and hardy workers. After they completed the canal they decided to make Georgia their new home. The Chinese were Cantonese and liked the mild climate of Georgia because it reminded them of their home in Southern China. The workers sent for their wives and families and settled down. There is a Chinese community in Augusta which has descendants of the builders of the canal.

Turning Swamplands Into Farms

Along the Sacramento delta the land was once swampy and full of mosquitoes. California wanted to convert this area into productive land. Chinese laborers were hired to reclaim these "tule lands." In 1879, the Chinese, using shovels and wheelbarrows and working waist deep in muddy water, built floodgates and levees. The wastelands were turned into fertile fields where asparagus, beans and fruits could be grown. Chinese workers reclaimed land in other parts of California, helping the state to grow numerous and abundant crops. California now produces a fourth of the nation's fruits and vegetables.

Unsung Heroes of the Transcontinental Railroad

Chinese workers on the Central Pacific Railroad carved 15 tunnels through the mountains and laid tracks across the Sierra Nevada in winter. The work was hard and dangerous. Some Chinese were killed in avalanches and while handling explosives. While racing to beat the Union Pacific coming from the East, Chinese workers laid ten miles of track in one day!

At the Golden Spike Ceremony on May 10, 1969, marking the completion of the railroad, the Chinese were not included in the celebration. Those who risked their lives to build the railroad were forgotten.

Ng Poon Chew

Ng Poon Chew came from Canton, China when he was fifteen years old and became a house servant in San Jose, California. He worked hard and went to night classes. He became a minister of the Chinese Presbyterian Church. In 1900, he started a daily Chinese newspaper, the *Chung Sai Yat Po*, which means the *Chinese Western Daily*. He wrote articles in English and Chinese opposing unfair immigration laws against the Chinese. He was a humorous and brilliant speaker. He reminded audiences throughout America that the color of a person's skin is not as important as knowing that "all blood is red."

An Aviation Pioneer - Fung Joe Guey

In the dim light of the early evening of September 21, 1909, a Chinese-American made the first flight of a motor-driven airplane on the Pacific Coast. Fung spent three months building his plane in his little shop in Oakland. With the help of three friends, he hauled his home-made craft to a lonely hillside for a test at a height of fifteen feet. Heading for another turn, the propeller stopped and the craft fell. Fung was unhurt, and he continued to work on improving his airplane. His brief flight was a historic milestone.

Ieoh Ming Pei

Architecture is both an art and a science, and one of the most distinguished architects of recent years is a Chinese-American, Ieoh Ming Pei. Among Pei's best known designs are the John Hancock Tower in Boston, Massachusetts, the annex to the National Gallery of Art in Washington, D.C., and the Jacob Javits Convention Center of New York City.

He was born in Canton in 1917, the son of a banker. In 1935, he came to the United States to study architecture at the University of Pennsylvania but then transferred to the School of Architectural Engineering at the Massachusetts Institute of Technology (MIT). He was so torn between the two fields that he finally decided to take degrees in both. He graduated from MIT in 1940 and did graduate work at Harvard. After teaching at Harvard for several years, Pei established his own architectural firm with its headquarters in New York City. He became a naturalized American citizen in 1954.

The First Chinese-American Senator

Hiram Fong was from a poor family whose parents worked on a sugar plantation in Hawaii. When he was a child, he had to work, too. He took several jobs to earn money for Harvard Law School. When he was elected to the legislature of the Territory of Hawaii, he worked to obtain statehood for Hawaii. In 1959, he became Hawaii's first senator to the national legislature. In 1970, he was re-elected. There are many Chinese in Hawaii who are Hakka, like Senator Fong. Hakka people migrated to the Hawaiian Islands in the mid-19th Century.

Lao vs. Nichols: The Equal Opportunity to Learn

In 1970, Kinney Kinmon Lau and twelve limited English-speaking Chinese-American students brought a landmark case to the Supreme Court. They claimed that the San Francisco Unified School District denied them a "meaningful opportunity to participate in the public education program." All their classes were in English, and, therefore, they could not understand what was being taught.

In 1974, the Supreme Court delivered its unanimous decision against the school district and ordered "appropriate remedy" for these students. The court declared, "There is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education." This landmark decision launched bilingual programs for many non-English speaking students. Classes are being taught in public schools in Spanish, French, Filipino and many other languages, as well as Chinese.

"Prejudice is Being Down on Something You're Not Up On"

Harry W. Low is a Superior Court Judge of San Francisco. He has fought for court reform and civil rights for all people. He has studied anti-Chinese laws, and says "we must learn from history." Judge Low says that laws and courts are supposed to protect us, to guarantee the rights of life, liberty and property. Bad laws must be repealed. "Each generation must improve on the preceding generation," says Judge Low.

Three Nobel Prize Winners

Chen Ning Yang and Tsung Dao Lee made an important scientific discovery in physics and won the Nobel Prize Physics in 1957. Yang was 34 years old, and Lee was only 30. By offering their new theory, the two men changed man's outlook on the universe. Working together at Columbia University, the two scientists demonstrated that the law of parity, which had governed research in nuclear physics for 30 years, did not always hold true. By making this discovery, they opened the way for important developments in the investigation of the elementary particles of the atomic nucleus. Nineteen years later, a third Chinese-American scientist, Samuel C. C. Ting, received the same honor. In 1976, Dr. Ting was given the Nobel Prize for his research in the field of subatomic particles. He was working then as a professor at the Massachusetts Institute of Technology.

Richard Chew - An Award Winning Moviemaker

Americans of Chinese ancestry can be found in the arts, including painting, literature, music, and architecture, as well as in the media. Richard Chew is one of these individuals. As the youngest of five children, he grew up in East Los Angeles where his father owned Chew's Cafe. He studied hard and went on to college where his interests changed from mathematics to philosophy to law. Finally, as a news assistant at a Seattle television station, he decided that what he really wanted to be was a filmmaker.

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Chew worked on an Academy Award-winning documentary, "The Redwoods," for the Sierra Club and a film on the Peace Corps. He felt that both films were worthwhile because they had important messages. Later, he worked on award-winning feature movies, such as "Conversation" and "One Flew Over the Cuckoo's Nest."

Richard Chew also worked on one of the most popular movies in history, "Star Wars." He was an editor for this science fiction adventure, which took two years to make. Chew received an Oscar for his fine work.

"One of the Greatest Instrumental Talents Alive"

That was how the famous violinist Isaac Stern described Yo-Yo Ma. As a child of four, Ma's father began teaching him to play the cello. At the age of five, Yo-Yo could play Bach suites, and at seven he performed on the Johnny Carson show. As a teenager, he studied music at Harvard. At twenty-five, he gave 125 concerts in one year in Europe and America. Audiences and critics alike acclaim Ma's performances as brilliant and beautifully moving.

"I Didn't Want to Teach People to Hurt Each Other"

Bruce Lee was born in San Francisco. He and his family went to Hong Kong where he studied martial arts from a famous master. He returned to America and attended the University of Washington to study philosophy. He continued to practice kung fu, developing his own techniques. Before Bruce Lee became a star, he opened three kung fu schools, one in Seattle, Washington and two in California. He wanted to teach people self-knowledge and discipline, not to start fights. Americans first saw Bruce Lee's skill when he played Kato in the "Green Hornet" television series. Though he tried, he could not get any roles other than being someone's sidekick. He left Hollywood and made kung fu movies in Hong Kong. These made him a legend around the world.

Chinese-American Writers

Many other Chinese-Americans have outstanding reputations in the arts. Jade Snow Wong, Pardee Lowe, and Maxine Hong Kingston have all written autobiographical books on growing up in American Chinatowns. Maxine writes of her experiences and feelings as a child of Chinese immigrants growing up in the United States. Her works include *The Woman Warrior: Memories of a Girlhood Among Ghosts* (1976) and *China Men* (1980). There are also writers of children's literature, such as Ed Young, who wrote *Lon Po Po,* and A. Louie, who wrote *Yeh-Shen*, the Chinese Cinderella.

Connie Chung

Connie Chung is a well-known television news personality. She was born in the state of Washington in 1946 and given the name Constance You-Hwa Chung. Chung, who began her career as a television news reporter, has won several awards including a Los Angeles Press Club Award for the best television reporting in 1977 and two Emmy Awards.

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